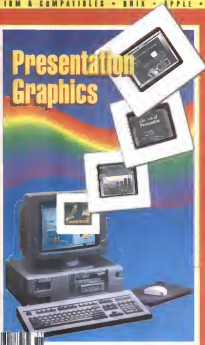


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LETTERS TO THE EDITOR



Freedom in The Desk

I am writing from Hamilton, Ontario so far away because I have liked your computer paper so much. I am so impressed by its content that I discarded a copy to give you friends to the length and where I work. They have thought very highly of your paper.

I would be very grateful if you could give me one of this computer paper to use for a day. I can send you all the mailing and handling expenses. I am sure some of my friends would like to be on your mailing list.

Neil Pines

Where Can I Get The Paper?

The interested to note: Mind Link's apparent connection to The Computer Paper, which it also carries monthly elsewhere. Finding a copy is a bit impossible, even working at the distributor's store. Would it be possible for at least some of the contents to be available on-line or as downloadable files on Mind Link? At some point, could Mind Link make

available a list of locations where The Computer Paper can be found? I'd want to prepare the perfect subscription as to ensure regular delivery to my address — assuming that cost is reasonable!

Rob Mathews
Vancouver

Knowing that you should not stand on the sidelines of The Computer Paper, we are currently working on an online edition with them. The new Vancouver-based on-line information system, scheduled to come later in the year, will be published into the system.

The Computer Paper is also available at most of the area's convenience stores, public libraries, restaurants, bookstores, computer stores and in our bright blue mailbox display boxes throughout the downtown area. We deliver bundles to large corporations which have them available to interested employees. We also offer a one year subscription to The Computer Paper for \$29.95. For more information about distribution, please call us at 733-4356.

SPA Sales Up

I consider how much of the increased sales in software reported by the Software Publishers Association (Microsoft, Comshare Computer Group) is due to their marketing program. I am particularly amazed that one of the biggest steps in sales was in games, which, I used to be heavily pessimistic. If the small programs in its first warning were more "straight", then I expected the SPA in their words multiplied efforts to get more to their copyright seriously.

Gary Steady via Day

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would be foolish for us to close our own doors and leave the hardware business," comments Lou Fano, S&M, 252-777-7660.

Canadian News

STM Systems Acquires Apricot Distributor

TORONTO, ONTARIO, Oct 26 (MR) — STM Systems, a subsidiary of International Systems-Tek-Tek International, has acquired AIG Computers, the exclusive distributor for Apricot computers in Canada.

AIG, whose own business Apricot in Canada, will continue as a separate subsidiary of STM, said Ray Lumsdaine, an STM spokesman. The purchase price has not been disclosed.

Lumsdaine told *Newsday* the move was the first step in hardware distribution for STM Systems, Canada's largest computer service business and systems integrator. He said he could not speculate on the possibility of further moves in the near term. "I would image that a lot will depend on how we do with Apricot," he said.

AIG has distribution rights for the Apricot line only in Canada, and Lumsdaine said there is no immediate prospect the deal will lead to parent International Systems-Tek-Tek distributing the British-made computers through its international operations. International Systems-Tek has no offices in Canada, possibly personal computers. Contact Ray Lumsdaine, STM Systems, 414-679-2000.

SCOM Gets Contract For Network To Support GST

OTTAWA, ONTARIO, Oct 16 (MR) — Pella suggest most Canadians aren't thrilled about the Goods and Services Tax (GST), a broad-based sales-tax system due to take effect January 1. The people of Western Canada probably like it better than most, though. SCOM has been chosen to provide software for a 3,000-workstation network that will help Revenue Canada administer the tax.

SCOM's S-Open LAN Manager software will be the primary software for a network that will connect 34 sites across Canada. The company has announced. The network will give Revenue Canada's staff access to a central GST database on a mainframe computer in Ottawa.

Revenue, an Ottawa-based federal government contracting firm, designed the network. Peter Hays, president of Revenue, told *Newsday* his company chose LAN Manager because of its support for multiple protocols, its openness and its growing popularity. Hays's promise to provide support for S-Open standard for electronic mail exchange was also a factor, he said.

Since the network will be connected to an IBM mainframe, Hays said, using LAN Manager will allow the use of IBM's NetWare network management system.

The workstation will be IBM-PC-based personal computers running MS-DOS, before the IBM network servers, mostly IBM PCs, and also for part of the system. Philip Information Systems of Montreal and Trillium of Waterloo, Ontario, are to provide the PCs. Hays said. Contact: Lorette Lam, The Commerce Group for SCOM, 414-447-0202, Peter Hays, Revenue, 414-552-2521.

Canadian Firms Pair Statistical Data, Analysis Software

OTTAWA, ONTARIO, Oct 8 (MR) — FirstMark Technologies International and Tensat Computer Applications of Vancouver have agreements with each other's software. Tensat's Plims and Plimsat provide statistical Canada census and survey data, while FirstMark's KnowledgeWorker is a tool for analyzing databases.

"We feel we have a complement in place right now in one who will sell the other's software first," Barry de Villis, vice president in charge at FirstMark, told *Newsday*. The packages will be sold

under their original names, he said, although FirstMark and Tensat have had discussions about the possibility of joint venture support.

Though both companies are looking to expand in the United States, said de Villis, he expects more success in Canada with Plimsat and Plimsat. Initially, since the data they provide is Canadian. But he said it will be useful to FirstMark in the U.S. market to be able to demonstrate its product working with statistical data from the Tensat's Tensat has plans to produce products for the U.S. market, he added.

KnowledgeWorker also works with other, Lotus 1-2-3 and Microsoft Excel

files. Contact: Barry de Villis, FirstMark, 414-752-8020.

Mission Cyrus "On Ice," Hoping For Early Thaw

VANCOUVER, B.C. Oct 13 (MR) — Mission Cyrus, Inc. had lost just prior with automation plans to sell, highest potential companies in the North American market, has suspended operations and laid off most of its employees. But the company hopes to resume operations in financing deals in the near future, spokeswoman Barbara Adams told *Newsday*.

Adams, who said to be a consultant retained to keep the operations going until



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mainframe and systems have a built-in 384K hard system. And an optional hard drive with a configuration for storage. And a PC compatible expansion slot.

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Correl Schedules End Annual Design Contest

OTTAWA, ONTARIO, Oct. 11 (RE) — Correl Systems Inc. announced the Second Annual Correl Design Award Design Contest, designed to promote the Windows-based graphics package CorrelDraw.

The company will give out more than C\$300,000 worth of cash and prizes. Kevin Evans, contest coordinator and last year's contest drew more than 500

entries from 11 countries, ranging from the art to corporate logos and business cards. The winner from each country will receive a C\$1,000 prize and be among the finalists for a grand prize to be awarded at a ceremony in Ottawa on May 16, 1991.

The grand prize consists of C\$10,000 in cash plus a complete PC system. Second-prize design prize winners get a more will also be given out.

CorrelDraw announced that CorrelDraw for OS/2 is now shipping. The suggested retail price is US\$95 or C\$75. Contact: Kevin Evans, Correl Systems, 615-705-4000

Supermac, Radius Announce Graphics File Compression

SAN JOSE, CALIFORNIA, Oct. 11 (RE) — The technology makers of Macintosh monitors have built an announcement in compressing video images.

Radius and Supermac Technology announced software based on the Polar Photographic Experts Group, or PEG, compression standard. PEG allows compression of video images at a rate described by Radius of up to 50 to 1 and Supermac's up to 10 to 1. Compression is flexible because large-screen Macs

color images can easily take up several megabytes. A four-screen setup that image displayed at 300 dots takes up a pile of disk space.

PEG is an evolving international standard drafted by the CCITT and ISO.

SuperMac said it will include its SuperGraphics compression software with all color cards and disk systems beginning in January 1991. In addition, purchases of color cards products after October 1 will receive the product free when it ships. SuperMac will also be generally available by Q3'91.

Radius also announced PEG compression software. As yet unnamed, the software will be available in November for US\$95.

Both announcements came shortly after C-Scan Microsystems, San Jose, Calif., announced software which allows developers to incorporate PEG2 compression in their programs. That software, called Image Compression Interface (ICI) will be available in November for US\$125. The company said ICI has been adopted by Apple, AppleLink Systems, Macintosh, AppleLink, and AppleLink. SuperMac and SuperGraphics will use the ICI software. Contact: Susan Newman, C-Scan, 408-944-4000, Jennifer Delamater, SuperMac, 408-773-4423, Jeanette Hertz, Radius, 408-474-0000

Image Club Drops Prices On CD-ROM Photo Sets

CALGARY, ALBERTA, Oct. 5 (RE) — Canadian-based Image Club Graphics has reduced the price of its Lotus from CD-ROM by US\$1,000 to US\$1,999. The Lotus from the contains 400 fonts in Postscript type 1, type 3, and outline formats.

Image Club also offers the same Macintosh-based Image Club Graphics has reduced the price of its Lotus from CD-ROM by US\$1,000 to US\$1,999. The Lotus from the contains 400 fonts in Postscript type 1, type 3, and outline formats.

General News

Software Industry Feedback

WILMINGTON, CONNECTICUT, Oct. 17 (RE) — Digitized or version Group of Standard CT has announced the availability of its "Software Industry Feedback." This is a 400-page 11-chapter book for the software industry that helps executives write business plans, look for acquisition targets, make initial stock offerings, and optimize the performance of their companies.

The "Software Industry Feedback" is priced at US\$195. A disk with more data in the Lotus 1-2-3 file format is US\$40. Contact: Jeff Silverman, at 203-348-2391 for more info.

Syquest, Microtech Sue Each Other Over Drive Mechanisms

EAST LANSING, CONNECTICUT, Oct. 4 (RE) — A major battle between two drive manufacturers is now on its way to court, and one of its prime members is suing each other — the manufacturers claiming components and the vendor alleging poor performance.

Syquest Technology, Fremont, Calif., has accused designers of its removable overdrive drive mechanism Microtech International, of Scottsdale, Ariz., and

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With the sophisticated PHOTONIX BIOS on board, OMNITEL motherboard gives you sensitive run time diagnostic check, boot-time up and greater compatibility with a wide range of hard drives and operating systems: MS-DOS, OS/2 (including V1.2), PC-MIL, COMPAQ/SMART DOS, 1-COM, UNIX, XENIX and NOVELL. Its unique L20 diagnostic video aid helps you troubleshoot your computer more efficiently.

Making all-layer dry film design and thick 12 mil traces by using cutting-edge technology, OMNITEL motherboard is more superior in reliability when comparing to any 100 mil motherboard that made with a 4 or 6 layer thin film design and thin 8 mil traces.

For long-term reliability, all components on board have been pre-tested and certified. We are confident of our reliability and we are proud to offer you the best reason to choose the OMNITEL motherboard: 3 year manufacturer warranty!

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meeting the needs for US\$100,000 chips is cited as. Microsoft has responded with a US\$1 million lawsuit, charging that Spynet failed to meet quality targets.

Debra Long, Microsoft's marketing communications manager, told *Newsbyte* that Spynet had promised earlier this year to respond to letters at its three offices and fail, with the level dropping over time. Long said that in a letter dated September 4, Spynet President Fred Etkin "admitted that he failed to live up to his promises."

Just before Spynet's vice president of marketing, named as an intervenor with Microsoft, filed his company's petition for declaratory judgment, he told *Newsbyte* that his company provides three mechanisms to "at least 15 to 20 companies. Each of these places the mechanisms in their own box and adds their own electronics. When you put all the pieces together, some customers have low entry costs, some have high entry costs with the same" mechanism.

Long said that Spynet would continue shipping three mechanisms that compare well with competitors, and that Microsoft would continue to honor its warranties. In addition, she said, Microsoft would offer to replace defective Spynet-based drives with either conventional drives or nonvolatile-memory drives based on a mechanism built by Intel.

Motorsol Announces Settlement With Hitachi In Patent Suit

SCHAUMBURG, ILLINOIS, Oct. 9 (UPI) — Motorola Inc. announced that a multi-year patent lawsuit has been resolved with Hitachi, Ltd. in the intellectual property and technology dispute regarding Hitachi's H-18 and H-16 microprocessors and Motorola's 68000 and 68010 microprocessors.

Terms of the settlement were not disclosed. Motorola said earlier that it would file patent lawsuits with Hitachi in the U.S. District Court of Appeals for the Federal Circuit and the U.S. District Court for the Western District of Texas (Austin Division) regarding that suit pending cases involving Hitachi's microprocessors and Motorola's microprocessors be dropped.

In a prepared statement, Motorola Semiconductor and Products Division President and General Manager James A. Ruckelshaus said, "We are very pleased with this settlement. Our remaining goals in this legal action were to protect Motorola's intellectual property and to ensure our customers an uninterrupted supply of Motorola's best-selling microprocessors. These microprocessors are the 'heart' of many products."

James A. Ruckelshaus, Motorola, 708-536-5542.

Blackbox Fights Jet Lag

KEENE, NEW HAMPSHIRE, Oct. 14 (UPI) — Researchers say the best way to fight jet lag, either when traveling home or carefully timed exposure to light and darkness to adjust to a new time zone. A small British-designed computer, now available as Blackbox, is designed to help passengers adjust.

The Blackbox calculates the right time for a traveler to be exposed to light and dark, based on the local times of departure and arrival, length of flight, and diseases traveled, and Jennifer Fox, a partner in The Marketing Clinic Inc., The Marketing Clinic Inc. has acquired the rights to market the Blackbox in the United

States and Canada from Medical Technology International of Scotland.

The Blackbox has been sold in Britain for about eight months, Fox told *Newsbyte*. The first shipment recently arrived in the United States. The price is US\$129, with an introductory price of US\$99 until December 31. Contact: Jennifer Fox, The Marketing Clinic, 603-352-4450.

Paperback Software Responds To Lotus Settlement

CAMBRIDGE, MASSACHUSETTS, Oct. 17 (UPI) — Lotus Inc. was a major and first victory in its longest-running "lock and key" suit against a maker of a competing spreadsheet program, Lotus Development Corp. that it has reached an agreement with Paperback Software and Stephenson Software, its development partner, for the deletion of its Lotus 1-2-3 copyrights.

In June, U.S. District Court Judge Robert E. Keeton ruled that Paperback of Scituate, Calif., and Stephenson Software of Vancouver, British Columbia, released Lotus' copyrights as 1-2-3 by copying software, claims in all the software programs it uses to create Paperback Software, agreeing to pay US\$200,000 settlement to Lotus Development and promising to remove all its copies of VP Planner from the market, will not proceed as a result of the loss of the costly lawsuit, now pending in federal court, nor proceed with and marketing.

Withdrawing from the market, "leaving a settlement with Lotus allows us to continue to use the marketplace under the circumstances. It's an important precedent to the settlement."

The US\$200,000 fine will be paid by software companies, as well as an effect Paperback Software's fortunes. "Our intention was to continue to make a software business. We still intend that the judge's decision was a very big win for us. We have learned a lot from this case."

Keeton said that the case was better fought by people with deeper pockets.

Blackbox says Paperback Software hasn't ruled out the details of how the thousands of small copies of all three versions of VP Planner will be taken off the market. The programs are controlled by their owners and are not sold separately.

Paperback Software, founded by John O'Brien, who is now the firm's largest shareholder, has about a dozen employees. O'Brien has not taken an active role in the company since February, opting to pursue time into an enterprise when it was in the hands of Steve Cook in the firm's present.

Blackbox says that the company will now be sold as Lotus 1-2-3 clones. "We intend to modify and market our position as the number one provider of spreadsheet development tools for Lotus 1-2-3." He says that VP Expert is the expert system with the largest installed base in the world.

VP Expert is the expert system with the largest installed base in the world.

Local Area Networks

LAN Time Goes Twice Monthly

WASHINGTON, D.C., Oct. 16 (UPI) — Starting with the October 16 issue, McGraw-Hill's LAN Time will be pub-

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Editorial notice each month and be simplified, by the addition of new sections and a rearrangement of the editorial material.

Editor-in-Chief David J. Paster says in his editorial that the change was made to improve coverage of an "ensemble of new U.S.A.N. members."

With an eye to the environment, L&L Tents has dropped the plastic polypropylene mesh that had been used to ship the pop-up tents. Co-owner David Stratton, L&L Tents 800-545-1000.

Network Problem Causes Bank Off Balance

TORONTO, ONTARIO, Oct. 18 (AP)—Customers of the Canadian Imperial Bank of Commerce could not check their bank balances for several days recently due to problems with a network's computers, says Bank of Commerce.

Bain McLeod, a spokesman for the bank, said a network connecting tellers in the bank's branches developed problems after a new program was installed. The bank decided to shut down the net-

total, temporarily while the problem was corrected. Doping testers in several teams noticed unusually few clean three-day tests (about one out of three).

The network was shut down from Wednesday, October 3 to Friday, October 5, McLean said. When service was restored, it took most of the weekend to update bank balances from the national network. Until that was done, customers using automated teller machines could not obtain current account balances.

Circulation system problems are common for any bank, but Leland must be satisfied "that our currency is longer than normal." Creditors: Rob McLeod, Canadian Imperial Bank of Commerce, 416-593-2000.

Laptops

AMD Offers New Language Model

AUSTIN, TEXAS, Oct. 5 (NR)—Advanced Micro Devices (AMD) says it has created two highly integrated microprocessors that incorporate all the components of the original IBM AT motherboard on one CMOS integrated circuit, a development expected to accelerate the move to smaller, cheaper, and lightweight laptops and other consumer devices.

The single chip, the *Am95C02T*, contains a CMOS-0.5μm macroprocessor and AT-compatible peripheral, including DRAM control logic, two DMA controllers, two interrupt controllers, three counters/timers, a real-time clock with CMOS RAM, flexible clock generation logic and an enhanced bus controller (support also provided for L2M 4.0 EM86 memory management). The chip is said to be the functional equivalent of an 80486 AT motherboard that previously required

In a development close to the "just add water" approach to making video, a PC maker needs to throw in one integrated processor, a keyboard controller and external memory devices in order to complete the PC components to make new video systems.

AMD says samples will be available in the quarter while production is slated to start in the second quarter of 1991. Both processors will be offered initially in speeds of 112 and 140 MHz. Prices in U.S. dollars range from \$100 to \$150 for the AMD68010, \$125 to \$175 for the AMD68020, \$150 to \$200 for the AMD68030, \$175 to \$225 for the AMD68040, \$200 to \$250 for the AMD68050, \$225 to \$275 for the AMD68060, \$250 to \$300 for the AMD68070, \$275 to \$325 for the AMD68080, \$300 to \$350 for the AMD68090, \$325 to \$375 for the AMD680100, \$350 to \$400 for the AMD680110, \$375 to \$425 for the AMD680120, \$400 to \$450 for the AMD680130, \$425 to \$475 for the AMD680140, \$450 to \$500 for the AMD680150, \$475 to \$525 for the AMD680160, \$500 to \$550 for the AMD680170, \$525 to \$575 for the AMD680180, \$550 to \$600 for the AMD680190, \$575 to \$625 for the AMD680200, \$600 to \$650 for the AMD680210, \$625 to \$675 for the AMD680220, \$650 to \$700 for the AMD680230, \$675 to \$725 for the AMD680240, \$700 to \$750 for the AMD680250, \$725 to \$775 for the AMD680260, \$750 to \$800 for the AMD680270, \$775 to \$825 for the AMD680280, \$800 to \$850 for the AMD680290, \$825 to \$875 for the AMD680300, \$850 to \$900 for the AMD680310, \$875 to \$925 for the AMD680320, \$900 to \$950 for the AMD680330, \$925 to \$975 for the AMD680340, \$950 to \$1,000 for the AMD680350, \$975 to \$1,025 for the AMD680360, \$1,000 to \$1,050 for the AMD680370, \$1,025 to \$1,075 for the AMD680380, \$1,050 to \$1,100 for the AMD680390, \$1,075 to \$1,125 for the AMD680400, \$1,100 to \$1,150 for the AMD680410, \$1,125 to \$1,175 for the AMD680420, \$1,150 to \$1,200 for the AMD680430, \$1,175 to \$1,225 for the AMD680440, \$1,200 to \$1,250 for the AMD680450, \$1,225 to \$1,275 for the AMD680460, \$1,250 to \$1,300 for the AMD680470, \$1,275 to \$1,325 for the AMD680480, \$1,300 to \$1,350 for the AMD680490, \$1,325 to \$1,375 for the AMD680500, \$1,350 to \$1,400 for the AMD680510, \$1,375 to \$1,425 for the AMD680520, \$1,400 to \$1,450 for the AMD680530, \$1,425 to \$1,475 for the AMD680540, \$1,450 to \$1,500 for the AMD680550, \$1,475 to \$1,525 for 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NEC Launches Tintex Reflexion Pro

TOKYO, JAPAN, Dec 19 (RE) — Japan's personal computer giant NEC is launching the personal computer industry into new territory with a new, superlight, personal computer, Shoshy90, which is roughly half the size of a current notebook-sized computer and weighs only 1.1 kilograms despite having a standard 100-MB floppy disk drive.

The manufacturers invest much in several technologies, such as the integration of an IC (integrated circuit) memory card and a 1 TB MR (magnetic) RAM (random access memory) storage device. There is also a monitor LCD (liquid crystal display) with a multi-keyboard. The manufacturer is also aware of the environment.

MS-Word is an integrated software program including Japanese word processor, database, spreadsheet, business charting, and communications commands on the memory card. A school site management software program is available in ROM based on a micro-

[illegible]

Though a Japanese industry report says that NEC will market an IBM-compatible version of the machine for the overseas market in the future, an NEC spokesman did not provide any details on Newbrite's Computer, Info. Res., Public Relations Officer, NEC Corp., 674-200-0000.

Company Intro: Notebook With Advanced Technology

NEW YORK, NEW YORK, Oct. 11 (UPI)—Compaq Computer has introduced a powerful new notebook-size computer that it claims is the most powerful computer of its kind in the world. It is the first computer to use a printed circuit board technology known as "Bagd Fish," which was originally developed by Telidonix Electronic Machines for aerospace and defense military applications such as missile guidance systems and stealth fighter component systems.

Ragel Plus was initially developed to meet space and weight and to ensure greater reliability of control boards by eliminating separate, detachable cables in favor of flexible interconnections. Company used Ragel Plus to create a single, control circuit board for the new notebook system, designated the Company LIT 500a, 700, that also can use a 11.5 inch sheet, single sided or two sided and with two a compact, multilayered part that results in a size of 4.3" x 8.5".

The Compag LITE 3000/20 has a 60-MB (megabyte), 5/4-inch high-density drive, a built-in hard disk memory, a serial, and a miniature (about the size of a package of chewing gum) power supply. The drive is also available in a 30-MB capacity and the computer has optional 1-MB and 4-MB memory cards that can be added to a maximum of 1.5 MB.

The suggested retail price for the 85 bill model is US\$9,999. For the 90 M model, the list price is US\$10,499. The suggested retail price for an available desktop configuration is US\$12,499. The new notebook computer is expected to ship before the end of this month. Contact John Norrmy, Compaq Computer, 215-254-1304.

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1. Total population	1,210,000	1,215,000	1,220,000	1,225,000	1,230,000	1,235,000	1,240,000	1,245,000	1,250,000	1,255,000	1,260,000	1,265,000	1,270,000	1,275,000	1,280,000	1,285,000	1,290,000	1,295,000	1,300,000	1,305,000	1,310,000
2. Male population	605,000	607,500	610,000	612,500	615,000	617,500	620,000	622,500	625,000	627,500	630,000	632,500	635,000	637,500	640,000	642,500	645,000	647,500	650,000	652,500	655,000
3. Female population	605,000	607,500	610,000	612,500	615,000	617,500	620,000	622,500	625,000	627,500	630,000	632,500	635,000	637,500	640,000	642,500	645,000	647,500	650,000	652,500	655,000
4. Total population aged 0-14	242,000	243,000	244,000	245,000	246,000	247,000	248,000	249,000	250,000	251,000	252,000	253,000	254,000	255,000	256,000	257,000	258,000	259,000	260,000	261,000	262,000
5. Male population aged 0-14	121,000	121,500	122,000	122,500	123,000	123,500	124,000	124,500	125,000	125,500	126,000	126,500	127,000	127,500	128,000	128,500	129,000	129,500	130,000	130,500	131,000
6. Female population aged 0-14	121,000	121,500	122,000	122,500	123,000	123,500	124,000	124,500	125,000	125,500	126,000	126,500	127,000	127,500	128,000	128,500	129,000	129,500	130,000	130,500	131,000
7. Total population aged 15-64	768,000	770,000	772,000	774,000	776,000	778,000	780,000	782,000	784,000	786,000	788,000	790,000	792,000	794,000	796,000	798,000	800,000	802,000	804,000	806,000	808,000
8. Male population aged 15-64	384,000	385,000	386,000	387,000	388,000	389,000	390,000	391,000	392,000	393,000	394,000	395,000	396,000	397,000	398,000	399,000	400,000	401,000	402,000	403,000	404,000
9. Female population aged 15-64	384,000	385,000	386,000	387,000	388,000	389,000	390,000	391,000	392,000	393,000	394,000	395,000	396,000	397,000	398,000	399,000	400,000	401,000	402,000	403,000	404,000
10. Total population aged 65+	200,000	202,000	204,000	206,000	208,000	210,000	212,000	214,000	216,000	218,000	220,000	222,000	224,000	226,000	228,000	230,000	232,000	234,000	236,000	238,000	240,000
11. Male population aged 65+	100,000	101,000	102,000	103,000	104,000	105,000	106,000	107,000	108,000	109,000	110,000	111,000	112,000	113,000	114,000	115,000	116,000	117,000	118,000	119,000	120,000
12. Female population aged 65+	100,000	101,000	102,000	103,000	104,000	105,000	106,000	107,000	108,000	109,000	110,000	111,000	112,000	113,000	114,000	115,000	116,000	117,000	118,000	119,000	120,000

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Ogiva Technologies

Intros 286 Laptop

MONTREAL, QUEBEC, Oct. 18 (AP)—Ogiva Technologies has introduced a light-weight-business computer called the Intros 286. The system features a VGA-compatible LCD display, a full-size keyboard and a 30-MHz hard disk drive.

Without the battery, the unit weighs only 4.5 pounds. The system employs an 80386 microprocessor and has a 1.5-MHz (megahertz) operating speed. One MB (megabyte) of RAM (random access memory) is standard and an add-on memory module is available. The screen is high-contrast negative-contrast LCD with 600 x 480 pixel resolution. There is a video adapter slot as well as "intelligent" connect" ports to 32 devices of type.

The company says that the keyboard has the feel of a desktop computer keyboard with 82 full-size keys and 100-key module in the program window to use a full-size keyboard.

The overall footprint of the unit is less than 1 square foot. It has a removable, rechargeable NiCad battery pack that is good for two hours and a standard AC Adapter/Quick Recharger that plugs into an AC power source.

The Intros 286 is available immediately at a list price of \$19,995. Contact: Ogiva Technologies, 118-320-0548.

2nd Generation Notebook

PC From Sony

TOKYO, JAPAN, Oct. 15 (AP)—Sony has announced its first notebook personal computer, QJ/Note PCX-20068 series, based on the 386 architecture, and says the machine is more advanced than the standard generation of business computers in terms of ability to handle large applications and as performance on LSI (large scale integrated) chips.

Expected to be released next spring, the high-end machine of the series, the N85, is no exception that it can run Microsoft Windows 3.0, and it has a 20 megahertz (MHz) CPU (central processing unit), 40 MB (megabyte) of DRAM (dynamic random access memory) and a minimum expandable to 640. The low-end machines include a 10MHz CPU system with 20 MB of DRAM and 2MB of main memory expandable to 640.

The three machines are 10 to 10.5 by 16 inches in size and weigh 3 kilograms. Sony promises that the built-in battery allows one hour of continuous use when fully charged.

Computer hardware manufacturers with the machine, MS-DOS 5.0, 1, Microsoft Windows 3.0 and QJ/Note PCX-200 V 3.0 expanded memory sticks, which was developed jointly with U.S.-based Quantum's Office Systems.

Sony has also given the unit what it calls a "FullMouse" — a computer device installed on the upper right side of the keyboard and which functions like the trackball on Apple Computer's Macintosh Platform.

The price of the lowest machine is 190,000 yen or US\$1,040 with accessories in 100,000 yen or US\$570. Components for each higher-end model. Shipping is added for the first half of December and Sony has no plan to ship the machine to overseas markets at this time.

Sony has also said the battery notebook computer so that it can be used

without a power cord. desktops have not the existence of other types of desktop units. The PCX-20068 will provide a 3.5-inch FDD (floppy disk drive), CRT (cathode ray tube) interface and power supply for the notebook computer. The 300 MHz will add a full-sized slot on the base unit and the N85 will add an Ethernet interface on the bottom of the N85.

The price of the Desktop Unit ranges from 100,000 yen to 120,000 yen or US\$1,040 to US\$1,200. Contact: Sony Corp., 65-444-0200.

IBM World

Red Ink Still Drops

Wordstar, President Resigns

NOVATO, CALIFORNIA, Oct. 18 (AP)—Following another consecutive quarter of losses, Wordstar, formerly Micropro, has lost its president, Greg Gryn, and its general manager and chief financial officer, Jim Doolittle. The firm, once a high flyer on the world of word processing software, suffered a net loss of US\$17,028,000 in the third quarter ended Aug. 31.

That loss is smaller than last quarter's net loss of US\$793,000, or 4 cents per share, or a reduction of US\$1,517,000.

For the fiscal year ended Aug. 31, 1990, the company reported revenue of US\$197,179,000 and a net loss of US\$4,585,000, or 35 cents per share. For the fiscal year ended Aug. 31, 1989, Wordstar reported revenue of US\$143,157,000 and a net loss of US\$1,034,000, or 22 cents per share.

Regarding the resignation of Greg Gryn and Jim Doolittle, the board of directors issued a simple statement, saying that it believes Gryn had accomplished the task of reducing the company's operating expenses, and that the decision to resign was amicable on both sides.

The company says the disappointing results are due to lower sales in North America, a problem anticipated when the company initiated a restructuring program earlier this year.

The challenge for the coming year, according to company officials, will be to improve revenue and unit sales, generate new products and continue the restructuring program.

Contact: Joan Carbone, Wordstar, 415-353-4000.

Keep Track Of Clients

With French Version Of

Maximizer

WINSTON-SALEM, N.C., Oct. 4 (AP)—

Richardson Software has announced that Version 2.0 of its contact management software Maximizer is now available in French.

Jacques Peters, a spokeswoman for Richardson, said the program code is actually bilingual and can be switched between French and English at will. The difference between the versions is the language—the data is the same. Because of the extra cost of adding French capability for a smaller market, she added, the French version costs \$295 for the desktop version and \$245 for the notebook version, versus \$295 and \$245 for the English-language version.

Richardson has offered French releases of previous versions of Maximizer.

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Mitsubishi's diamond quality technology in CMOS compatible and can be a LAN server or work with DOS. The high performance MP386/25 has eight expansion slots, making it an ideal multi-tasking, multi-user system. Back for the Mitsubishi MP386/25 - the power user's personal computer for the future work environment.

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modem and control each other's success or end time.

It is in *Fit Media Manager* in the first cost-effective multimedia program that allows database to store multimedia still images, video, audio, and text. Users can now PCX, GIF, or TIF (the standard file for Amolebit Automator) graphics with a 1/4 screen viewing window at in full screen. It is possible to search for specific records based on text, video, graphics, or audio information. Photo, audio, and images and video can be selected from the database, expanded and displayed back in order for approximation format. Users can view still images or video while simultaneously listening sound associated with the images. This software can be used as a front end to all the leading database products and is fully compatible with Paradox 3.5 (even a user Paradox's Paradox in the underlying engine to create a fully relational database).

Nonlinear update with John Wilenski, CEO of HBC Software, says that, "Up until now, multimedia has been hype and promise and short on delivery because while the hardware has been there, the computer people didn't make audio and video people had made. And a waiting software to bring all the components together."

"Before we had to bring multimedia together and we want to be the leader," Wilenski continued. "We started on the imaging field. Photo graphics was missing at the time right when the mass market was developing affordable image processing software to fill the gap. However, we were not satisfied with the *State By Media Manager* in which the *State By Media Manager* is the first application. Our commitment is to the end without layers of software to go through. It includes the controls on regular VCRs and other products people are accustomed to using so it doesn't drive people to learn all new operations. We want them to be comfortable with the software as others to be 'friendly'."

Wilenski told *Newsday* that one of the most multimedia products never in video direction—described by the user. He noted that the *State By Media Manager* has been in development for over 10 years—what's "just happen."

HBC, with its *State By Media Manager* and *State By Media Manager* has the only software company chosen to join Compaq, Trimedia, and Amulebit in a cooperative arrangement that United States for demonstration to 1500 top dealers. "They did make other hardware companies to go along, but we are the only software company. Of course we are 3, 16, and 16-bit in the same technology."

The *State By Media Manager* will be available on October 1 for a retail price of US\$499 through major distributors, selected OEMs and VAs.

Contact: Michaela Reichen, Miller Communications, 315-423-4455

Trends

Japan Telecom Offers International Video Phone Service

TOKYO, JAPAN, Sep 17 (AP) — VIDEOCALL International, the video and audio services of Japan's international telecommunications (JIT), started a long-distance service using an international ISDN (integrated services digital network) in October. The service provides the facilities

of KDD's color motion picture videophone into hotels in the U.S., Hong Kong, and Japan.

The service is based in Tokyo, and later will be extended to major metropolitan areas. The service headquarters in Los Angeles and Singapore to start, and eventually will be installed in New York and London.

A 10-line-minute call on the videophones from Tokyo costs \$200 per minute in Los Angeles and \$200 per minute in US\$40 in Singapore.

VIDEOCALL decided to offer the service primarily following a favorable test of the experimental international videophone service. In the annual test, which started in September, 1989, callers could make videophone calls for free between Tokyo and New York.

Contact: VIDEOCALL International Corp., 03-585-3331

Telecom

Mitsubishi Offers Smallest, Lightest Cellular Phone

TOKYO, JAPAN, Oct 11 (AP) — Mitsubishi Electric has announced the availability of what it claims is the world's smallest and lightest cellular mobile phone, said for the consumer market. The firm says the phone will be available next week.

The cellular phone, named Mitsubishi Handset Cellular Mobile Telephone, measures 160 by 54 by 25.5 millimeters or about 1.64 in. by 2.14 in. by 1.0 in. It is made of metal and plastic, weighs 110 grams, and has a 10-watt transmitter. It has a screen display and includes a hand-free kit. It was developed by Mitsubishi Communication Industries.

The phone has many functions, including a telephone number memory capable of storing more than 100 numbers, and a 10-stage alphanumeric display. It also has such features as a vibrational ring, memory power level indicator, and electric field intensity display.

The world's smallest and lightest, portable intelligent cordless to AMPS (advanced mobile phone system) specifications of U.S.-based telecom giant AT&T. It will go on sale this month in Australia, Canada, Hong Kong, Korea, New Zealand, Singapore, Taiwan, Thailand and the U.S., where the AMPS units are used. Mitsubishi is selling 100,000 units a year. Contact: Mitsubishi Electric, 03-14-4537

America Online Enhances Apple Services—Readies IBM Service

VIENNA, VIRGINIA, Oct 18 (AP) — America Online, Quantum Computer Service and other services for Apple II and IBM users, has enhanced its range of services, and confirms plans to publicly launch an IBM service later this year. Among the new services for IBM available for Apple II and Quantum are those from IBM Corporation, Select Software Solutions and Working Solutions. In addition, a new service catalogue is now available online. This service lists more than 15,000 software packages for the Apple II and IBM, as well as MS-DOS-based computers.

On the IBM/OS/2 screen from, Mary Reichen, a representative of America Online, told *Newsday* that their new plans to introduce an IBM PC and com-

particle service soon. "There have always been plans to launch an NFL service. We are working towards that," she said.

In the meantime, she added, MS-DOS computer users can access the Apple II and file service using a package from Genicom, which drives the American Online system software. The software is being handled with Laser Computer's Laser Pal 100, a machine intended to compete directly with the home computers recently announced by IBM and Tandy.

American Online is accessible via Telecom and Tspacnet in the U.S., as well as via direct dial. The service costs \$19.95 per month, which includes one hour of usage and unlimited unlimited telephone support. Monthly time charges of the stated hour per month are \$19.95 weekdays and weekends, and \$19.95 during office hours.

Newsday® has won its American Online™ list twice improved. Readers can enjoy the various sections such as Apple, Mac news, eBooks, images and so on (print and short) graphical user interface. A powerful keyword search facility has also been introduced. Contact: **Quantum Computer Services**, Tel: 203/444-0700.

UNIX

Toronto Firm One Of Informa's First Marketing Partners

TORONTO, ONTARIO, Oct. 18 (UPI)—Washnet, a Toronto maker of productivity tools for Intuit's Quicken software, has agreed a joint marketing agreement with Intuit.

Informant spokeswoman Cathy Donohue said the agreement is one of the first two such deals Informax has signed. The other is with FourChan Software, a maker of code-generation software.

Franc Conrad, chief executive officer at Wladette, said his four-year-old company has fared unusually well in the Canadian market to date, though it has sold its softness in the ramp up in Turkey. The Indonesian deal will "give us a lot bigger exposure," he told *Newsweek*.

Informatica will bundle WindStream/ WindCode, a data-entry code generator and WindPoint, an interview form-design tool, with Unix versions of its Informatica-4GL application development tools and its Informatica-OnLine and Informatica-SE database engines.

Infocampus will endlich überbrückt werden
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Control said his company, which started out as a consulting firm, chose the Williams software modification development because it was "the best database product out there." Williams's software is designed strictly for use with the Williams product, he said. Contact Bruce Conrad, Williams, 404-493-7800, Gato, Georgia. Information: 615-484-5000.

Sun Canada Calls In Kourou To Improve Service

MAJIDIAN, ONTARIO, CANADA (M)
an **Ass. Microsystems of Canada** Ass.
signatured elsewhere by **Ass. of Canada** and
provide service on **Ass. hardware** across
Canada.

Up to now Ben Canada has provided all major office hardware directly, such as copiers, modems and fax machines.

Monday. Though she denied that anyone has been a weakness for her, she said the agreement would "expand and extend our hopefully already good nature."

Korea has more than 1,000 field service engineers across Canada, and provides third-party service under contract with a number of insurance companies. Contact: Carol Smith, Sun Marine/Canada of Canada, 416-477-6545, Harry Coppl, Korea Canada, 416-791-6400.

Scan Unwieldy New Low-Cost Laser Printer

MOUNTAIN VIEW, CALIFORNIA, May 28 (ENR)—According to forecasts of the engineering market into next year, the construction sector is competing more keenly for work. Many firms are projecting a 10 to 15 percent drop in 1989. If projections are correct, general contractors capable of doing competitive work, which is, those who do the fourth quarter. Also involved are the construction of new buildings. New FERC has been compared to a number of states, including Texas, South Carolina, North Carolina, Georgia, Virginia, Florida, New Mexico, Minnesota, Illinois, Texas, Georgia, Alabama, and Missouri.

San's Postscript software, still unannounced, is expected to cost around \$100,000 to develop, to be paid from the Postscript printer setup in which the printer and hardware post-descriptor languages, for example, Postscript, and fonts. The Postscript software resides on the laser computer, or SPARCstation, and it enables any computer-driven device to use the Postscript fonts and to use the fonts system, from that machine or laser printers to thermal printers and plotters, to produce Postscript-compatible output, the company says. The Postscript compatibility is obtained without a clone of Postscript, yet the end user can

CORRECTION

Keywords

Bolton's *Dance* Woodworth serves to remind me that in the short accompanying article the *South Coast* on page 46-47 of our Oct issue, I refer to the AOC (Analog to Digital Converter) rate of an audio CD, of course, as a DADR. (good I explained?) to convert the digital information stored on the disc back to an analog audio waveform. I mentioned the CD rate only in order to allow for an initially sophisticated reader's common-sense desire to compare. The AOC rate shown for CDs is, of course, the rate that was recorded at.

Mr. Woodhouse also pointed out that Ridge-2 (MR-2) and LAF-3 (LAF-3) have no additional sound effects found in the MT-32, even though they are advertised as "share all the features of the MT-32." This is apparently what I thought I understood (even "they" share the same specs as the "MT-32.") I spoke up for the advertised intent of the word SPEC, when I recently named FEATURES. It is my hope that readers will take function and specifications as go-goods and not be misled by the word feature.

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PRESENTATION GRAPHICS

Applause II



by George Skole

Product: Applause II business presentation graphics software

Publisher: Ashton-Tate, 20001 Hamilton Avenue, Torrance, CA 90503-0072

Availability: Available at most retail outlets

On Internet To: Executives who must prepare fast over presentations quickly
System Requirements: IBM PC or 100% compatible, 512 KB RAM, MS-DOS 3.1, Hercules, CGA, EGA, or VGA display, Printer, plotter or film recorder
Price: \$235

Key Features: Easy to use, Mouse driven, 1600 Picasso clip art database, Ashton-Tate Graphics Service

Overview

Applause II is a graphics presentation package. With Applause II, you can create most over presentations or import just one slide from a non-over presentation or database and create graphics or slides from the slide. Once you have information presented, Applause II can take you to the presentation with a mouse click and return and change mode. You can also be added in the presentation, with different font types available. A slide show can be created using a script editor and shown on other computers if the images can be printed, or Ashton-Tate's Telecommunications service through a bulletin communications utility.

Set Up and Ease of Use

Installation is a snap and takes less than 30 minutes. Once installed, the program is extremely easy to use. Our experience with other presentation packages that run trap software, coming up to Applause quickly. The whole system is mouse driven and set up for a mouse. In any system, even the most inexperienced of users could achieve repeatable results with Applause II.

Support & Documentation

We are used of computer manuals being bulky. And we are also tired of software publishers thinking that you are going to sit down and read the manual every time you need to change the program.

PRESENTATION GRAPHICS

Harvard Graphics



by George Skole

Product: Harvard Graphics V. 3.3 Graphics and presentation package for professional business presentations

Publisher: Software Publishing Corp 1801 Landings Drive, P.O. Box 7210 Mountain View, CA 94039-7210

Availability: Available through most retail outlets

On Internet To: Marketing professionals who wish to create multi-media presentations. Corporate executives who need to present client concepts in single groups. Entrepreneurs who wish to use their own computer for their marketing and presentations

System Requirements: IBM PC or 100% compatible 512K RAM CGA, EGA, VGA, or Hercules monochrome display board

Price: \$115, ALAN version is available for a retail price of \$2,295

Key Features: Hot key in slide show, Spell checking, Slide show, Letter-to-Letter, Predefined drawing, Overwrite slide service

Overview

Harvard Graphics is a full featured presentation graphics package containing most of the functions which you would expect from a professional presentation package. The only functions we found missing were included in a companion package called Super Slide Utilities which will do a retail price of \$100. Harvard Graphics will allow the user to produce output on slide, transparency, laser printer, colour laser printer, plotter and send the file to a overnight slide service. The copyright slide, service, Autograph, 3D/3D, a 3D/3D service, credit to line them. One note: the Toronto phone number in the brochure is wrong, the actual phone number is (416) 257-5181. For in Canada, it is a nice to see a map of Canada included in the package.

Set Up and Ease of Use

The installation process is a simple one that is completely governed by an installation program. It also requires from 7 minutes for a program-only installation on a 386-based hard disk (most of the time is spent changing the 33

Continued On Page 27

PRESENTATION GRAPHICS

PowerPoint For Windows



by Steve Williams

Product: PowerPoint For Windows Desktop presentation program

Publisher: Microsoft Corporation, One Microsoft Way, Redmond, WA 98008-6399

Availability: Available at most retail outlets

System Requirements: IBM PC or compatible with 286 or 386 processor (386 recommended), Windows 3.0, VGA, EGA, or 16-bit color video adapter supported by Windows 3.0 (except CGA), 1 Megabyte 386 RAM, Hard disk

Key Features: Imports data from Lotus 1-2-3, Lotus Symphony, Excel, HyperText, and word processor and spell checker. 16 million colors. Over 1000 slide show, 1000 Windows fonts.

On Internet To: People who do a lot of presentations using slides or overhead projects

Price: \$295

Overview

PowerPoint is a presentation package specializing in creating slide shows and overhead projects. With PowerPoint, you can create your own presentations or import them from other applications and create graphics and charts from data. You can enhance your presentations with 100,000 graphics clip-art pictures and custom drawing tools. Text can be added with a word processor and edited with the spell checker. You can create functions to go along with your presentations as well. Slide shows and overhead projects are created and edited with no effort. You can print your presentations or send them to a Graphics slide service using a bulletin board and communications utility.

Set Up and Ease of Use

The installation is done in the standard Windows 3.0 fashion. The set up is simple to perform and out is great options to be able to install the package or to install the package. The package is installed. Available that once is installed as a presentation slide options to install. This is particularly handy when you are in the slide show (as most of us seem to always be). Installation takes anywhere from about half an hour to

Continued On Page 29

PRESENTATION GRAPHICS

Show Partner F/X



by Steve Williams

Product: Show Partner F/X. Presentation package specializing in screen effects

Publisher: Benjamin Roberts & Company, Ltd., 100 E. Washington Street, Suite 100, Syracuse, New York 13202

Availability: Available at most retail outlets

System Requirements: IBM PC, XT, AT, PS/2 or 100% compatible, 380K of memory, 286K available, One or more disk drives, MS-DOS 3.0 or later. A system with the following graphics adapters or 100% compatible: CGA, EGA, Hercules Monochrome, HCGA, VGA. Show Partner F/X does not support Hercules Monochrome IBM Personal Computer Display, IBM Enhanced Color Display, a display monitor from the IBM PS/2 series, or 100% compatible. Mouse required for the Object Editor.

On Internet To: People who can utilize self-running or interactive demonstrations and presentations.

Price: \$495

Overview

Show Partner F/X is a presentation software package that specializes in creating animating slides. These slides are greatly enhanced with the screen effects, special effects provided by Show Partner F/X. Screens from other applications software packages can be captured, enhanced by Show Partner F/X, and then wrapped using a Script Editor to create professional-looking presentations. Captured screens are saved in separate text or graphics files that can be enhanced by Text Painter or Graphics Editor to appear as screens or add titles and explanations. Animation responses can be created using the script editor or with the aid of an Object Editor. Animations can be run on other computers or run together using a Script Editor. A Slide Show Editor is used to create slide shows.

Continued On Page 30

Continued On Page 35

Harvard Graphics Continued From Page 26

slide) to 2.5 hours to do a complete installation on a 4.75 MHz IBM PC. We could not recommend a person with a 4.75 MHz machine attempt any form of presentation graphics regardless of the program, else we would not consider the time for the installation to be a problem. Most people using this package would have a 286 or 386, which has installation times of between 30 and 60 minutes. Before the installation proceeds, the system tells you how long it will be. We found this very convenient—no you do not start on long load times with only a half hour of time available.

HarvardGraphics contained on our test machine is in. All other presentation packages required a change to either the hardware or the software configuration in order to run. The machine it was tested on has an odd configuration of hardware but Harvard Graphics is successful enough to handle it.

One function we appreciate on applications software is the ability to set a data directory. Harvard Graphics allows this. The reason we appreciate this is that it allows one to configure one's system in such a way that one drive is used for applications software and another drive is used for data. This is needed more and more today because applications need to take up a lot of disk space.

HarvardGraphics completely removes drives and a good number of the functions can be mastered without looking at the manual. Contact sensitive help is available. Thus if one gets stuck there may be no need to pull out the manual.

Reports & Documentation

There are two reports which come from Harvard Graphics, the first is the report from presentation. This report is coming from the two speakers, video-driven slide shows, which can be displayed with a video projector, 35 mm slides, overhead transparency, laser-printed presentation boards, transparencies, and large graphics done with plotters. In every case the output is impressive and enhances presentation.

The documentation is very well done. Not only is the manual complete and well-written, but it is presented in a user-friendly format which is quickly and easily read.

Error Handling & Limitations

We were able to make the product crash in very few situations. There are a few things to note which are discussed. In the very rare case where you are updating an old Harvard Graphics presentation, the program does not support this configuration. The configuration cannot wrap up the map file path in the Applications Menu. This means saving this option was only before using the options. With these two limitations noted, we found no other limits in HarvardGraphics.

Conclusion

Harvard Graphics is an excellent presentation package. One thing to note as a consideration is that Harvard Graphics is the top-selling presentation package. Usually when reviewing a top-

PRESENTATION GRAPHICS

Dan Bricklin's Demo II

by George Sklar

Product: Dan Bricklin's Demo II software: prototyping and demonstration program.

Publisher: Sage Software, Inc., 3200 Tower Data Boulevard, Redwood City, CA 94063

System Requirements: IBM PC, XT, AT or compatible; Monochrome monitor; DOS 2.1 or greater.

Of Interest To: Systems analysts wishing to communicate to users software concepts either to end users or programmers. Secondly, anyone interested in demonstrating, marketing or teaching software programs to others through a PC.

Features: Captures screens from applications; Creates screens with Demo II's editor; Programmable key events.

Overview

Demo II allows the user to capture screens from a presentation software application and then program them together into an interactive self-running demonstration of the application. This would be the most common use of Demo II, yet it could also be used to create screens and key events for an application yet to be produced. Added to this Demo II would let to create screens which demonstrate to an audience some of a presentation product. For the purposes of this review, we focused on the software-related application of this product—demonstrating an existing product or the prototype of a new product.

Set Up and Ease of Use

Demo II is installed simply by copying the distribution disks to your hard disk. Demo II is not a program executed from a source user set; in fact, the primary users of Demo II would be software developers. Perhaps this is why it is not the most user-friendly of software sets. Once Demo II is installed, you go through the task of creating your screens and writing routine hardware for those screens. If you are creating a demonstration of a pre-existing product, you can save a little time in copying the screens from the application and importing them into Demo II. If you are prototyping, you are able to create the screens with an editor in Demo II. In both situations, the most difficult and time-consuming task is writing up all the appropriate routine actions for each screen.

An efficient demonstration takes several hours to plan before starting to use Demo II. Each screen of the demonstration up to 15 minutes to program the routine actions. An efficient demonstration will contain actions of 200 different routines or more. That 50 to 60 hours of total work is required to complete an effective demonstration.

Documentation

The documentation for Demo II is complete and concise, yet it is not written as a manual that a single user could understand. Sample screens will be

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Demo II Continued From Page 27

using this product, then the willing far-and-neat customer. Given the extended use, a program to monitor the demo installation is adequate.

Error Handling & Limitations

Demo II is a very solid product if you are more handling point of view. It was impossible for us to set up a situation which would crash the product. The only weakness to the product from an error-handling point of view is that you can create an error and the system will trap the error. There were rarely error messages to explain the error, then you would have to rely on your experience with the package to identify the error. Again, considering the extended use, the package as marketed is, this is not a major limitation.

There are other limitations with Demo II. The capture buffer is limited to the available RAM left after the application is running. Captured screens are saved as RAM was after the other and the capture buffer is not cleared until you run Demo II again. Try to capture more than 1 screen out of Windows running on a network. The next limitation is on the application the transaction option between the screens of your presentation—there are only three. The list of limitations grows when comparing this to other presentation and demonstration products. However, when you look at the extended use in a prototyping system, the limitations seem negligible.

Conclusion

Demo II functions most successfully in a prototyping product, and is not as successful in a presentation or demonstration product. If it is a prototyping tool, Demo II is very effective. For use by a system analyst to present a prototype system to a programmer, Demo II is a very effective product. The Demo II has any other area where it could be used, and you will find it somewhat limiting. Considering its limitations, if displaying systems as a consultant, either internally in an organization or on contract, this tool was recommended in Demo II.

Rating

Performance - 3.5 - It becomes cumbersome in the presentation gets large.

Usability - 2.5 - Limited to a small external market (system analysts and software consultants).

Flexibility - 3 - Highly featured and not easy to read, but also complex.

Availability - 2 - Must be ordered through specialty programming stores or direct from Fuji Systems.

Price - 2.5

Harvard Graphics Continued From Page 27

using package, we find the reason for being the top-selling package is not being either that a really superior product. This is not the case with Harvard Graphics. We found an significant function which a competitive product featured that was not available in Harvard Graphics.

PowerPoint Continued From Page 28

approximately two hours of all optional choices.

Most people will find PowerPoint one of the easiest of all the presentation packages to use. In stock Windows 3.0 design and layout screen layout allows users to grasp the program quickly. We reviewed PowerPoint with a group of other presentation packages. It was the last package we looked at with others after being loaded with a number of hours from the previous packages, we found PowerPoint quite refreshing. Not only it was so easy to use, it was the reviewer's opinion, the most looking and best design of the presentation packages we reviewed. It also allows you create new presentations only by cutting and pasting from old ones.

Unlike macro-oriented graphics presentation packages, PowerPoint includes one-and-done and simplified presentation design and design capabilities. It is not packed with options that make the program overwhelming and sluggish. We did our testing on a 32 MB 486 333 MHz machine and this tool did not hamper performance in the least. There is very little waiting while charts on the screen are being regenerated by the program (refreshing graphics on a 386). Unlike other graphics presentation packages that boost the "complex" solution to use a presentation, PowerPoint is a presentation tool. PowerPoint is a presentation tool, and the user interface reflects this.

Reports & Documentation

Slide presentations produced with PowerPoint are quite impressive, although not quite as impressive as other more sophisticated packages can produce.

The documentation is very good. The manual is hard cover and is attractive and easy to read. A reference section contains all screen options in the program in alphabetical order. A quick reference card for creating presentations is also included.

Error Handling & Limitations

Errors are trapped effectively and the program default crash on any of our tests.

PowerPoint is not just "tool" presentation graphics interface. It looks a little different, but not present in other packages. One cannot go back to modify the screen after presentation packages, although you can import ASCII files, then from screen spreadsheets, and even special graphics. One cannot customize the look of the program. When creating presentation graphics, one condition is automatically display the percent on label on value of a data point, but not a combination of the three. Thus they have to be added separately if you want more than one. As well, PowerPoint does not support GDI.

One significant limitation is the lack of a standard slide-show utility. One can view slides directly from the program, but not standard, standard, or others are not easily displayed on other computers. This is not a major limitation, but it is a significant limitation if you need to display presentations on other machines or on other computers.

Continued on Page 30

Continued On Page 30

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PowerPoint
(Continued from Page 35)

conditions. Most other packages offer a range of conditions.

Conclusion

PowerPoint specializes in presenting slideshows. That's three times and fifteen times as many packages as there are in this book. We had to recommend a package that is a "complete" graphics and presentation software, we would not recommend PowerPoint. However, in all fairness to Microsoft, it is not too bad a complete solution by itself, even if it is not as complete as some of the other packages. If you need to produce presentations quickly, easily, and professionally and you find the medium of slide shows attractive, do not be without Microsoft's PowerPoint.

References

Performance - 3.7 - PowerPoint operation very quickly, presenting no noticeable delays. Runs effectively on a 200-MHz machine. We did not find this an ideal environment, however.

Unpublished data from our preliminary study indicate that the use of a single, one-dimensional scale is not sufficient to measure the construct of social desirability. However, it lacks a theoretical basis.

Marked - 5.4 - The manual is very good. The abundance of cross sections is useful.

Availability - 4 - Most retail outlets carry PowerPoint in stock.

1000

Show Partner FX
Continued From Page 28
Set Up & Ease of Use

The installation is automatically run by an install program. There are only a few options for installation, and then it is easy to upgrade releases.

The program is somewhat cumbersome to use initially, as moving around the program and selecting menu options seems to be a little unconventional. Also, each program looks different and operates slightly different from the next one, making the package harder to get used to. Once used to Stone Partner's little quirks, we found the software easy to move around in and actually quite fast. Entire scripts or parts of scripts are easily moved straight from the Script Editor state box into creating the script. This makes editing a snap.

To learn *Share Partner F/X*, one should definitely use the tutorial and experiment with the sample scripts, so that is the best way to grasp the program. The manual should be used more as a reference when one gets stuck. This is definitely a package that can easily transform an inexperienced user. However, with a little patience, a few hours learning, *Share Partner F/X* produces quite significant results.

Manuscripts & Documentation

Completed presentations can be reusing FEGH7W on special customer needs. You are free to distribute FEGH7W with our permission to Brightbill, Roberts & Company.

The documentation is clear and complete but we found the manual's authors poor. Once again, we should emphasize with the National Institute on

to leave the package and use the maximal move as a reference. This is a package that requires the user to create and then the maximal can't be no more than a simple reference tool outlining and explaining features.

Keywords: child sexual abuse; disclosure; self-blame

These Fortran handles errors quite effectively. In the script editor, upon errors occurring, fields are not updated and the previous contents are restored. The script editor did crash a couple of times while working with sample scripts, though it never deleted what was on our own. Thus we cannot conclude if this was the program's fault or our own interference with the process.

The Graphics-Editor is not as sophisticated as other drawing programs and it was a little disappointing. The benefits to create special accessories other drawing programs and then capture them with Show Pictures 3.0.

A system using CGAs is the best bet to receive patent protection on biomass-to-liquid product as can be viewed by most other machines. One major limitation is that slimes produced on ECG/PGC can not be used on a lesser machine, unless one uses hot streams. A major improvement would be to enable Shaw Partners E/C to produce CGAs/acidolates on ECG/PGC machines.

The readability of Show Patterns *VFX* Script Editor and the ease of creating and editing scripts is matched by other features that address production concerns. Eye-catching special effects are easily seen in being in each scene across all of those giving enhancing presentations. Show Patterns *VFX* through a 3D Script Editor, allows a user to create their graphs in the (dark) as easily as other presentations, perhaps one. Their look and style is enhanced by using a color and enhancing graphics in 3D through other software packages based on the show. Show Patterns is great for those interested in creating narrators, demonstrations and presenters.

References

Performance. 3.1-Show Factor T/O operates very quickly, producing no-unreasonable delays. However, it has a few little quirks that hinder performance slightly.

Conclusion 3.3: This package provides excellent functionality. It fills a market need that has hitherto gone unmet.

Manual - 3 - The manual is average.
Availability - 4 - Most retail outlets

1. *Journal of the American Medical Association*, 1997; 277: 1001-1005.
 2. *Journal of the American Medical Association*, 1997; 277: 1006-1010.
 3. *Journal of the American Medical Association*, 1997; 277: 1011-1015.

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Harvard Graphics
Continued From Page 38

Abstract

Performance - 3.5 - Howard Cleghorn operates very quickly, generating an excellent decision.

Disadvantages: 1. This package provides excellent functionality but is less user friendly because the price is substantial (currently the 1.0M version).

Blended - 4 - The program is excellent.
Availability - 4 - Most retail outlets.

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Persuasion

by Peter Millburn

Product: Persuasion 2.0
Publisher: Aldus, 411 First Avenue
 South, Seattle, Washington 98104
 (206) 832-1000

System Requirements: Any Macintosh with at least 2 MB of RAM. Hard Drive and Color Mac recommended. Price: US\$495

Aldus Persuasion is one of several presentation packages available for the Macintosh. Others include Gaiety Present, Microsoft PowerPoint and Symantec's Micro Present. Each package has gone through a long development process that has resulted in added features and improvements in the next generation.

Presentation packages help to organize your ideas and create ready-to-run visual media which assist in formal presentations. Before this software became available, presenters had to coordinate the efforts of several individuals within an organization. For example, a slide presentation would require the input of the presenter, artist and graphics people. Later desktop publishing presentation software streamlined this process and gave the presenter more control. However, the person using this software must also have the ability to create effective visuals.

Installation

As with all Aldus products, Persuasion comes with an excellent utility that lets you customize which files you want to include with the program. You have the option of installing micropresentations, master files and clip art. In all, this takes about 1 megabyte of disk space. One of the nice features of the utility utility is its ability to let you choose to view a set of diagnostics. It is an quick test system configuration (checking RAM, CPU's and SCSI's) and check the hard discage and duplicate boot files. It then writes a report to disk that can be opened in a TextEdit document. The entire software package comes on a set of five 800K disks.

Version 2.0 is a major upgrade that contains major enhancements. One of the most significant is greater flexibility in the outline, a spring tool which assists the presenter in organizing ideas. You can now create and type, non-continuous sections of outline items. This outlined feature is prominent in desktop slides as well as change their order. Because of the dynamic linking in your slide view, you can also use the outline as a slide view. Version 2.0 also permits you to format the outline text so you can use it as a handout.

Master Pages

Background content not much like master pages in a publishing program. They give your presentation visual consistency from slide to slide. With Persuasion, however, you can design multiple masters.

You can create unique characteristics out of the 10 chart formats in Persuasion. A drawing module is helpful for creating your slides with contemporary graphics. Otherwise you can import clip art in various graphic formats.

For those who would rather create their slides, you can import from PowerPoint presentations through the File menu. Use the Export command to transfer your Persuasion outlines to produce handouts in Art or text files.

You can access your on-screen slide presentations by using numerous navigation options (e.g., slider, direction, window, etc.). Automatic "bombs" are possible, where the image components appear over several slides.

For those who don't have the talent to create effective visuals, Aldus includes a dozen AutoIllustrations (and in Helvetica, which, as an industry) These templates have been created by professional designers to help give your presentation greater impact as your audience.

Persuasion comes with two manuals. One is a new feature guide for those already familiar with version 1.0 and the other is a complete user guide. Aldus also packages handy desktop references in the form of a flip chart. The reference has a context-sensitive online help system similar to PageMaker 4.0.

Persuasion supports many of the low-resolution resolutions which are common to the Macintosh. For those who don't have their own in-house slide processor, the documentation includes toolbars describing how to prepare your presentation for high-resolution screens. Aldus packages a screen-sizable driver that enables you to format your presentation for output in any AutoGraphics format. There is also a manual that explains how to build your presentation for output to a color video device.

This software has only one major drawback. Using a LaserWriter II X experienced problems with printing locations. Processing was successfully slow and sometimes plagued by Postscript errors. This is not now where Aldus definitely has to improve this product. Otherwise, Persuasion is a solid offering which ranks among the best of my presentation packages.

Peter Millburn is president of MACALATIONS, an independent firm specializing in high-end support and training. Some clients: 685-2nd Avenue S.W., Calgary, Alberta. Tel (403) 262-5704, FAX (403) 262-1837.

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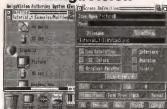
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AMIGA PRESENTATION GRAPHICS

AmigaVision



by Henry David-Lewis

Presenting AmigaVision for the Amiga. Publisher: Commodore Business Machines Ltd., Canadian Address: 3470 Pharmacy Avenue, Agincourt, Ontario M1V 3G3, Telephone: (416) 409-4282, FAX (416) 404-3795

System Requirements: Compatible with any Amiga, 1 MB+ chip RAM strongly recommended, additional RAM recommended, A2000 recommended for full power.

Price: C\$175/bundled with Amiga 2000, 2500 and 3000.

A HyperCard History

As everyone knows by now, Apple Corporation has led the computer world with the introduction of HyperCard, a popular "software creator set" for the Macintosh. Pioneered with this machine, the program created a great deal of excitement among Mac owners because, for the first time, ordinary users could create programs without the necessity of having to master a complex language or operating system.

HyperCard works something like a card file. What you see on the screen is a card which might hold words, pictures, sounds, animations, and/or movies. These cards can be manipulated like index cards in a file box. Groups of related cards are called "stacks" and Mac users have used it for everything from address books to complex databases to extensive manual reports.

Among its limitations, HyperCard is slow when handling animations, there's no color on screen except, only one card at a time can be viewed, and the size of the cards can't be larger than the size of the Mac Plus or SE screen (311 x 512 pixels). Nevertheless, generally speaking, perfect only one HyperCard function at a time. (Version 2.0 of HyperCard put related help in additional subroutines.) It can also hypercard cards and open multiple stacks. Check out the owner's new Additions from Macintosh Works for HyperCard animations...64.

Amiga-Gem Hyper

Within the past year, Amiga developers have begun to challenge the idea on what Apple has come to regard as "the new ground," with such improvements "backboard" products as desktop Treks,

Amiga's UltraCard Plus, and the recently released Canada by Commodore Corporation.

Now, Commodore itself may have taken that ground with its AmigaVision authoring system. Targeted mostly at the professional, training, educational, reference markets, the program allows the integration of computer files and video captions. Four-channel 16-bit stereo sound, MIDI external sound/light interface systems, protected video, external graphics and animations, the Amiga's feature computer speech functions, and mouse, keyboard, joystick and/or touch screen input can hold interactive or sequential, information, and/or educational applications. The program also has built-in database and animation capabilities compatible with database data. Disk-based user-name modules can be created automatically which pull all the elements of the presentation into one program.

Although it's essentially a programming language, the command lines, element words, and cryptic statements of traditional programming are gone, replaced by symbols and icons in what Commodore refers to as an "object-oriented" system. On working up AmigaVision 2.0, the new developer is confronted by visual clues pointing along the logical flow of the operation. By manipulating these symbols, and working with them a series of colorfully logical commands, you can assemble pictures and layouts, digitized sounds or language files, animations, speech, video, text and data files, to build programs which can be controlled interactively by the user and even through remote telephone devices.

With AHEAD, an interactive communications and control environment developed by William B. Brown (name added independently but included with the Amiga's Version 2.0 operating system), you cannot only run other software (including Canada) as if it were an AmigaVision module, but you can control and communicate with it, and, with the Amiga's multimedia capabilities, you can have several pieces of software streaming where the interaction with each other.

Icon-Based Interface

AmigaVision's interface is very easy to

use. After clicking on the icon, you are confronted by a grid. To create a program, you build a symbol-based flowchart on that grid by dragging icons or symbols onto the grid from a set of icons located at the bottom of the screen.

There are two non-sustainable means of other loans for financing on large control, interregional, then access and manipulation, writing for specific input conditions, nothing, rural access, and machine (and micro-utility) system. As an alternative to programming process create various substructures in detail, and then combine them into machines.

The **backspace** editor allows you to create "hot spots" for input, either invisible (perhaps over a graphic), or using a "bracket" (a small graphic created as a point process and then layered over the background text), and you may allow the input device to change from one track to another mid- or end-of-a-composition.

A Powerhouse With A Few Drawbacks

Although *Ameghinella* may be the most striking and successful survivor

systems developed for any machine, it can
run without an afterburner.

For example, although Canada's child development program is one of the most powerful first study can create some applications in Canada (for example, a "mother control" test interface or a sample game) which might be difficult to adapt to most. It could be said that despite program construction of the "motherhood" type is, overall, much more on Canada.

Most of the reasons for this are Anglo-American power, and the fact that the manual, while comprehensive, does not go far enough in providing detailed in-

structures. Each material, although informative, are simply explorations of previously-constructed new applications. There is no opportunity for the user to work step-by-step through the all-important design process.

Jeff Evans, product manager of Amper for Commodity Canada, admits that shortening and size negotiations are now underway with an independent firm to produce a manual of detailed materials for applications of different types. Still, the necessary information is there, and a formatted version can progress to "web post," although the learning curve is steep.

After reading the first three sections of the manual and working my way through the material, I was able to present some simple applications for manufacturing young children on the capabilities of the Jango, as well as on its use and cost. It took me several hours and a lot of cross-referencing, but the process was fun, and my next application will be a little more ambitious.

The *Ameghino* Authoring System comes on four non-copy-protected disks (two of which are *Ameghino*), and is extremely easy to use, packaged. The editor of the manual has left lots of room with images and/or notes (and you'll make them), and there's room for insertion, as well.

As part of its introduction of *Ameghinia* to Canada, Commodore Canada is offering the program to members of official user groups only for the unbeatable price of \$60. A letter has been sent out to all Canadian user groups. The offer expires November 15.

Free Amiga
2000...

Paul Scott Co.

According to Jeff Evans, Asaga Product Manager for Commodore Canada, the company is behind the product (and of course the Asaga) all the way and is putting its money, and its product, on the line to prove it. The objective is to build a wide base of recognized applications for the Asaga through demonstration.

The company has already underwritten (or is considering supporting) a variety of development projects in Eastern Canada (including the previously mentioned Inco project) and is now actively seeking proposals from potential developers in the West.

According to Evans, "We would be very interested in helping those people in Western Canada with proposals for the development of all innovative projects utilizing Amalgamation for support materials, materials, construction, hardware and software."

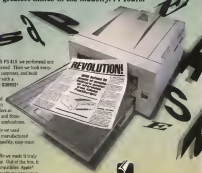
Among the possible approaches might be business, independent development, training programs, and so on.

The program involves licensing on **Design 2000** to the developer for 1 to 6 months (with possible extensions) as discussed in the below contract.

Providing developers with increased information about the program can demand considerable resources. Michael Head, chief of the Toxicology Branch in the Vancouver office at 421-4443, is also the provincial CEM representative. Bruce O'Connell is Calgary at 243-3000.

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Options include a barcode reader, electronic cash drawer and cash receipt drawer. A limited demo trial version available for \$150 that does everything the full system does, but only for 60 days. The price is affordable against the purchase price of the full version. Then just transfer over the files, and away you go!

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CORRECTION

Accounting Imbalance



What some readers of the Oct. issue's accounting article have asked is, why did the marketing director of our company get to take a swing at the competition, as Murray Davis of SummaWare told us when we quoted him as saying "They [NewView] don't have a order-entry function and most businesses are in the business of taking orders and selling something." Okay. Admitted here there were good reasons for your column's point into the most colorful among players. After a couple of well-timed diggers were returned to our office, we spoke with Murray MacIntosh, Director of Communications for Q & P Paper Associates, distributors of NewView. In '91, we asked him, that NewView does not have an order entry function. He explained that NewView is multi-module, and hence does not have separate modules for functions like Accounts Receivable, Accounts Payable, Payroll or Order-entry. Although the program does not have an explicit order-entry function, many companies legally use it for doing just that. (Yes, but are there the same constraints that WinWord has as a database? No diggers, please! Just giving it life also pointed out that our review focused primarily on the features of an ITM/BILL, and left the general impression that NewView "specifically or exclusively designed for the accounting requirements of professionals such as lawyers, architects, engineers and accountants." Mr. MacIntosh says "Although NewView does indeed address these, capabilities are extremely well, it is as that is complete accounting program which can be used by almost any kind of business."

To paraphrase Betty Everett, we're

Continued On Page 43

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UNIX WORKSTATIONS

Silicon Graphics:

With The Emphasis On Graphics

By William Barr

SGI Sets The 3-D Benchmark

If you work in science, you have seen what Silicon Graphics Inc. (SGI) computers can do. The "Parade" special effects in the movie, *The Abyss*, was designed and rendered on an SGI computer. The animated Great Inland Sea "Spotted Owl" commercial is another example. CGI also uses the video processing capabilities of SGI hardware for

special effects in their daily news broadcasts.

The automobile has succeeded in decreasing a divide between the real and virtual worlds, supported by 3-D computing. More programs are familiar to most of us, but I like to think of these machines as data processors. If you have a credit card machine, there's dimensional computing. SGI is the

standard in workstations.

Most of the major studios have entered their 3-D graphics sub-systems. R3A, HP, Apollo, Evans & Sutherland, and ILM. They all recently released graphics capabilities for their workstations to compete in the emerging fields of data visualization and medical reality. However, SGI still remains the company to beat. Even IBM bought SGI hardware for its new R/4000 series of workstations. Rumor has it that Apple is considering a similar purchase, too.

Competing Through Computing

To most of us, new and complex machines are pretty unimpressive. The guts even more complicated if you are

trying to imagine what a mathematical function looks like over a domain of values. The real advantage of computers in the studio is that the numbers are successfully processed, quickly. In some cases, this is not enough.

As the material and generated costs of prototyping increase, more companies are switching the way to build simulations and models. It follows that a more dynamic and accurate model will yield a better synopsis of that concept. Limit that advantage with the ability to change the model before it is built. If you can do that, you're really building something, and you have a very powerful design tool at your disposal.

Imagine being able to take your customers on a walkthrough of a highway before the lot is even purchased. You could even show them various lots of four houses on a photorealistic detail. Whether you are a mass computer designer or a new build, you could place your CAD software into a workstation and see the flow of water over your final design without building a physical model. Because coffee breaks, it's possible to test several iterations.

To stop following the crowd, 3-D computing saves design time (between \$1 and \$100, according to an independent study), decreases material costs, enables for us customers say for more than to be hired. As the saying goes, you have to spend a dollar to get a better idea. SGI just happens to provide the best hardware for considering that final image.

Horizon of Multi-Processing

All SGI machines use the MIPS series of RISC CPUs. This ensures heavy compatibility (programs don't have to be processor re-compiled) between applications on different platforms within the SGI line. The POWER Series workstations are capable of symmetric multiprocessing. Furthermore, the RISC operating system will automatically adjust over the load over the number of available processors.

As the lowest end of the product line we discuss workstation machines. These vary with increasing CPU performance and graphics capabilities. An unupgraded low would give you 10 MIPS, 1 MLOP, 4-bit color, 1 MB RAM, 19" color monitor, Unix, 500 MB HDD and a 150 MB tape drive at a cost of \$12,995-995. Double the price, and you get 19.4 MIPS, 32-bit color and 1 times the graphics performance (200 MLOP/sec), 1 MB RAM, 19" color monitor. The other two systems give enhanced CPU and/or graphics performance. The three line-end systems not designed to be personal workstations.

The rest of the line consists of the POWER Series. All the components in here can be upgraded with a graphics package capable of 1 million vertices/sec and 8 million polygons/sec. The base machine in the POWER Series is a single 18 MIPS CPU doing 30 MLOP and 1.1 MLOP/sec. The series tops off with a main unit & 35 MIPS CPU doing 300 MLOP and 30 MLOP/sec (measured). The high-end machine costs US\$250,000 (without disk). Considering what the competition is offering in the same price range, the SGI is a bargain.

Since the POWER Series uses symmetrical multiprocessing, you assign CPUs as you need them. For instance, you could give 3 processors their own CPU, or one process could use all 8.

However, hardware that does not make pretty pictures. Software is what makes a machine worthwhile using.



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These most of the software packages for the 386 machines are considerably less of the best are Comshare, Alter and MAPS). These are only three of them. There will probably be no application package to do what you want, but there won't be the variety available on other vendors' machines. You may also face higher software costs.

Powerful Co-processing

Graphics calculations are very processor intensive. By delegating a subprocessor to do the graphics processing and using specialized throughput hardware, even the slowest line becomes a graphics speed devil. In the personal computer world, it will become the standard, such as a line with speed CPU, a 386 line graphics with the same speed, the Amiga or faster. (There have been the Amiga series graphics subprocessors.)

So, even 5 custom VLSI chips on the motherboard to direct graphics signals and processes. This specialized hardware means that the CPU doesn't waste any more time in traffic cop. On the graphics boards, 802 uses 80 proprietary VLSI chips to manage all the video processing.

The graphics boards range in power from 50 to 125 MLOPS. These speeds are attained using TI TMS320C49 chips as a "geometry engine." The subprocessor has a specialized processor and storage architecture for every defined calculation. It uses a very fast hardware. There's a degree of delegation (combined with lots of memory for buffering calculations) allows the high-end graphics package to store 348 lines of information per pixel (1). Combined with 256 lines (a method) of storing 1-bit information to facilitate hidden-line removal and other custom circuitry, and 802 computers become formidable 3-D engines.

The Graphics Niche

When the founders of 802 set out to find a demand that needed fulfilling, they didn't build any number but four. For several years, their computers have been setting the standard for 3-D computing in a wide variety of applications, including scientific production, medical-vision systems, CAD, GIS, and simulations.

If you have a problem that can be solved by using the standard way of doing it, maybe something, look at the 802 machines. Serving is truly becoming.

William Barr is a senior partner in Barr, McCormick & Associates, a Vancouver management consulting firm.

WINDOWS SOFTWARE

Crosstalk for Windows

By Sam McManis

Product: Crosstalk for Windows
Publisher: Digital Communications Associates, 1855 Asterline Drive, Alhambra, CA 91801-4199. Phone: 404-449-4000.

System Requirements: IBM-PC compatible running Windows 3.0.
Price: \$49.95 • Free upgrade will automatically be given to registered users of version 1.01.

Rating: 3.75 on a scale of 1 (lowest) to 4 (highest).

Crosstalk performs just about all the normal telecommunications (remote) functions users expect under those much-labeled names (in fact, the definition really comes in the fact that, running under Windows, the program looks very nice and acts very well. There's really not much to talk about beyond previous Crosstalk has) or such communications, as Crosstalk pretty well has them all, so I'll concentrate on the way the program does its job and how the user uses the job being done.

The program has "phonebook" files to record options for the regularly used services. Within these files, the user can save not only custom addresses, but also display options as well as the first and color of screen areas. Important remote settings are displayed in status bars at the top and bottom of the screen, and function keys for displayed and user-defined status bars are set with the normal key combinations.

Options are many when it comes to the most common settings for communications. Most things have a "Menu" button which displays more options for that function than the menu screen. There are pre-set settings for 30 systems, allowing the user to choose the correct settings (and edit them) for each machine. Beyond the generic settings for each machine, which are used by all phonebook entries among the machines, most phonebook entries can also have various settings modified to allow for differences in behavior between.

Crosstalk lets the user know what's happening at all times. When a session



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so perfect a fit that every home will find itself at least in front of one. And they'll choose one. Why by the time that last number will be only purchase one? We think not.

Doomed To Failure?

For years, most in the industry have been convinced that there is a great unexploited home computer market out there in powerful systems, could be made affordable to the mass market, they would be glorious and. Yet, as industry watchers *Newsday* has reported out, every computer designed perfectly for the home has failed. Think only of the IBM-PCs, the T10s, the Starlins. Generally, there have been many consumers well served in the home but there have been Apple II, IBM-PCs, Tandy 1000s, and Macintoshes — all general-purpose computers whose owners have, for whatever reason, used them as home environments.

What many agree is looking for home computers to become a "must-have" for most consumers is a Mac-like type product for the home. There were small or personal computers available before the introduction of Macs, the first electronic spreadsheet, but they were used exclusively by programmers and engineers or by computer enthusiasts — persons for whom computers became a passion in themselves. We did not find, however, Home, Plus, IBM 100s or even desktops or corporate or small businesses without Mac-like. With that introduction, computers for the home, the Apple II became the useful element and then its successors replaced others. They revolutionized the way things operated and now, less than 10 years after the advent of Mac-like, we find very few firms of any size that do not have some type of computer.

Who Needs It?

We do not have a similar compelling reason to buy a home computer. Generally, it's helpful for persons who use computers — education to have a smaller computer at home to work on. Education is significant in students' life to be able to use a computer at home for papers, reading research, etc. But those people could make other arrangements outside of home, greater school or university, etc.

The benefits of having a computer are well known to the education sector as well as those but they do not have to have a computer. Computers will only become a commodity when they become an essential house item and we're not there yet.

Tandy vs. IBM

Tandy seems to understand where we have to go better than IBM — or, so it seems from the recent introduction. The user interface and associated programs provide for much routine household items as "moving notes on the refrigerator" and developing shopping lists from receipts. Tandy also understands the storage area will not want to have to learn 1,000 or more to prepare a simple budget, or to manage a stock or bond portfolio to maintain an investment inventory of valuations. These functions are business features of the interface and associated programs. On top of that, there is a reasonable user interface through Desktop. The user only has to learn a small set of commands that are rather intuitive.

IBM, on the other hand, handles Microsoft Windows on PC/1. The user has to learn how to use a program to do any of the mundane functions listed above. Certainly one can produce a more sophisticated budget or shopping list. Works fine through a mouse utility, but the user has to learn a considerable amount. We don't think it's necessary if we have to learn a program to do it.

The PC/1 does, however, have one significant advantage, as we mentioned, over its Tandy counterpart. It is a highly recommended based on many times to developing facilities, technical assistance and multiple file change. We think that the feature is extremely important and should have been an integral part of Tandy's design. Tandy can, of course, point out that communications can easily be added to a system, but that's not the point. It's not part of the rest of the machine.

Where do we go from here? Well, for one thing, the home will go on for the compelling applications. We tend to believe that it will be found in the kitchen, which has become the central focus of the so-called modern family. We feel the interface can be improved into a more

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the a problem to be successful in the future and that PC technology will be of importance here. Finally, through its CRAL subsidiary with pen technology developed by inventor CHS-Pak, seems to be in an excellent position to succeed in that area.

Another point that seems important to me is the integration with other home electronic devices. Why should people have to have both computer and television screens on both computer and stereo speakers? Some may wish to, but

constrained by budget or space, such as a college student, should not have to duplicate one unit and space. If multitasking is possible, it must not be as difficult to hook up in a good stereo. Perhaps video and audio connections through wall jacks will become common in homes.

Eventually the computer should become the home controller — with a screen, perhaps, right in the refrigerator and a pen hanging next to it. This home controller will be able to act the

micromanager and investigate other places in the home (where members run across them) on the information system through a pressing of a remote control button), receive information from magnetic data base or from a more traditional PC elsewhere in the home, order items automatically from selected stores, etc. In short, do an improved manner all of the tasks that always used up the householder's time. I must be done with passion, it must be done unapologetically and it must be easy to use! It may all be done so that we suddenly aren't there yet!

LOW-TECH

UPGRADE? JUST SAY NO!

Edited by John McNeill

I am about to speak, having, so be prepared. I have the latest computers made, the latest software on my shelves, and spend my working life writing and writing about computer systems, yet, despite that background, I seldom upgrade my personal working software. The programs I use to make a living.

Whereas all computer companies are always offering newer, faster, bigger, and better software, some often overlooking important changes that may be essential but usually just adding some extra features here and there or changing the shape of the tail fin.

In a non-Panasonic response, many users automatically start downloading when they read the first announcement of an upcoming update of their favorite program and keep to place orders with no thought as to what the new version will do that their old one won't.

I can tell you what the new version will probably do even without knowing what programs you have.

New versions of old software will generally run slower, have more memory bugs, require users to learn new ways of doing old things, need more memory, possibly better video, and, oh yes, might just have some new features you are desperate for.

For myself, I will keep a wonderful relationship with WordPerfect 4.1, even though I don't use my hard disk, word, removed, and learned my goal.

WordPerfect made some great changes to the way the program uses memory and I give them high marks for the changes, but, since my bandwidth of software would all have to be rewritten to run under Version 5, I haven't got my place for it in my daily working life.

Despite these features in WordPerfect, mostly relating to desktop publishing, I have not upgraded my hard copy program. In the press, why should I? After all, I don't foresee any of those new features and would lose some reliability in my daily life.

WP 5.0 was bigger and didn't add a single feature that I wanted, so I don't put it on that list either as a particular, most upgrades tend to add bulk and new features that few users want, often added merely to outpace the competition.

While many upgrades are basically hardware, that isn't always true.

One past upgrade of Norton Utilities added a bug that would wipe out hard disks with larger than standard partitions of CRAL. It was a huge mistake to upgrade this that I nearly broke Andrew Tate. The last guy on, but you get the idea.

And, even if there would have been upgraded more often, but never?

Why? Simply I have gotten used to WordPerfect and the effort to become proficient in WordStar again would cost me too much productive time, as we only use for WordStar in a full word processor that will run on a laptop or other small memory machine, and the old version runs comfortably on under 256 kilobytes of RAM.



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MATHEMATICS

MathType

by Sam Williams

Product: MathType for the Mac and MathType for Windows (two separate packages, each running on its appropriate platform)

Publisher: Design Science, Suite 302, 6475 S. E. Pacific Coast Hwy., Long Beach, CA 90803 (Phone: 714-432-0885)

System Requirements: Macintosh Plus or higher and 8-M-compatibles running Windows 3.0

Price: \$529.95 for Mac version, \$349 for DOS.

Rating: 4 (on a scale of 1=lowest to 5=highest)

Summary: MathType is an equation generator that allows equations to be incorporated into word processing and layout programs for support PostScript-compatible devices.

Equations Processing

One alternative to solutions of word processing and page layout programs at the moment is the use of equations. But this often may be difficult to achieve professional results in complex equations in a way which calls for a fine line-pulling system is possible. For the professional (and the non-professional) user, Design Science has released MathType, a very powerful equation generator.

Whether working on a Mac or a PC, MathType programs you the same power, and can even open Mac MathType files on the PC and vice versa. Additional tools are supplied to allow for a wide selection of mathematical notations. Modified equations can even be used from the most complex equation can be on the screen within a few minutes, easily by pointing to your favorite page-layout program.

The program works by generating, for example, an integral sign with dotted outline boxes ("dots") for upper and lower limits, and the function to be integrated. By simply entering the appropriate values in these slots, the user can quickly add a professional-looking equation with a minimum of fuss. For corporate websites, "steps" of symbols, equations, and equations allow the quick insertion of them by clicking on them. Moreover, groups of equations provide the full range of symbols and equations (symbols, and/or a separate group of symbols or equations types).

The program has a handy feature of manipulating (and even like new, and automatically writing them into an existing (or new) document automatically to be added). Any part of an equation can be inserted type style and use attributes changed, or these can be changed for all equations, allowing the easy integration to an established professional style. Spacing and measurement attributes can also be modified.

Files can be saved as RTF (Rich-Text Format) or PDF (PostScript) or PDF on the Mac, and RTF or Windows Bitmap (WMF) on the PC. Equations can also be copied into the Windows clipboard in WMF or TIF compatible, which allows equations to be pasted into TeX or other output. On the Mac, MathType can be run via Desk Accessory or under Multitasking for use while the page layout program is being used. On the PC, MathType supports Dynamic Data Exchange (DDE).

MathType is one of the best equation processors on the market. The whole program allows the user to generate symbols in the text, while the user shows a lot of the work of the power. The program has been well thought-out, with a professional-looking and performance that bring the user and results.

Ratings

Performance/Value: 4. For its relatively low price, MathType delivers the goods for equation processing. The central intelligence of the program makes it worth-while for anyone who needs to show

complex equations in their printed work. An Asset/Design-oriented technical manual, using pointing equations is produced on DOS or Mac systems.

Usability: 4. The possibility of files and general use of the MathType on almost essential solutions to the technical manual products, while also allowing the lower-level user to achieve professional-looking results.

Market: 4. The professional MathType user will set up and allow users to gain a high level of proficiency on the program. The construction makes only a great team for those who may be

looking to look at the manual. Most users would be able to start creating equations right away, but it is recommended that you read the manual — there are many worthwhile, non-obvious features in the program.

Availability: 3.5. MathType is only available directly from the manufacturer. It can be obtained by calling 714-432-0885 (any, there is a toll-free number) or writing to the company address above. There is an additional charge for postage and handling that will be added to the price of the program.



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NEXT COMPUTERS

Seybold '90: Apple Fritters, NoXT Revs Up In Gutenberg's Garage

by George Sirovitz

Apple Abandoning DTP?

That just may be even more software developers and publishers express increased frustration at Apple's seeming abandonment of the Desktop Publishing market, a market they viewed as uniquely suited with their 1989 introduction of the first PostScript Laser printer.

All the rage of these times is publishing, a worldwide market of nearly \$2 billion each year, Apple has underplayed much energy pursuing the largely untapped market for Multimedia and

Desktop Video production. Many of the companies that have helped develop DTP on the Mac first find Apple as a competitor in its technological field on the growing graphics arena. Not surprisingly, many of them are the first time considering developing products for other platforms.

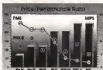
Seybold This Year And Last

At this year's Seybold '90 Publishing Conference in San Jose, much of the heat had settled from the turbulence events there the year before. At that time, Apple had just sold off large amounts of Adobe stock and announced

strategic alliance with the company. The two giants planned to develop a new structure to Adobe's PostScript, and with it, a new line standard, then called Royal, later known as TrueType. Adobe, in charge of the product, was lost.

Then, in surprise move, Adobe president John Warnock stood up and announced that he would publish the previously unpublished specifications for the Adobe Type 1 font format. In essence, Adobe was forced into the "open operation" by the Apple/Microsoft companies.

When Apple announced their future system software would support TrueType



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"without serious issue" for months, only to find Apple's implementation of the specification (according to reports, the one they knew it was) to be ready about mid-1991. Adobe continued with a product already

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Also included is a new version of MacXTend-to-learn MacXTend operating system in a substantial suite of other bundled software.

Local Publishing Platform

For publishers spring the system, the Bayhead manufacturer discards that MacXT is picking up steam. While Apple was present in the show, their space-optimized booth was at the back, and appeared largely unattended. By contrast, MacXT's large booth, (spatially called *Convergence*) (convergence into local and remote, right into the customer, and now

well-equipped with a plentiful supply of the new MacXTstations.

Inside, Apple showed Illustrator 3.0 running on color on the new color MacXTstation (pink, pink), and Quark displayed a beta version of their MacXT System to the eager throngs. From showed a new version of their powerful *VisualMaker* publishing software, which is already shipping. Several scanner and other peripheral manufacturers also focused on announced MacXT versions of their hardware.

The MacXT booth was packed with people even when the rest of the booth were conspicuously empty many folks

who were prepared to be disappointed came away with a sense that MacXT is coming on strong.

Stealing Apple's Thunder

One of the hottest things talked to in the new MacXT system software is a generic file system driver. This allows you to plug in a regular Macintosh-type file system, such as the popular Model 24/40 made by Ashton, and read or write files from any MacXT application. By simply reconfiguring CGM options, the results of the accounting file can be converted back to extend text as constant, while graphic elements can be saved as

TIF or EPS files. MacXT itself can even handle digitized raster manuscripts, to any the computer's limits in any application.

Instant Software

Largely because of the MacXT-type development environment, MacXT software is instantly easy to write. Using the MacXT's Application Builder, a fully-functional user interface can be developed in minutes, even more words in minutes. In fact, in the words of one of the developers of *WinEffect* for the MacXT, "Our development cycle is one-third of the time it normally takes."

Similarly, in their October 1990 issue, *AppleMagazine* says, "Combined their own reasons for choosing this platform, and the fact of which in the latter development environment that comes standard on the MacXT." Of the results of Lotus' efforts, *AppleMagazine* "outstanding... a spreadsheet for the market."

I had a chance to test *Impress*, and I suggest that anyone who expects to use 1-2-3 or Excel on these "other machines" takes a few minutes and try *Impress* for yourself (Impress can read and write standard Lotus 1-2-3 files). In differences from the usual post-Word-like spreadsheet model are working, yet it also simple, and obviously a better way, that I prefer that in the years, this will be the way spreadsheets are. For now, though, it is clearly one of MacXT's unique advantages.

As a special offer, MacXT has announced that a copy of Lotus' spreadsheet *Impress* will be sent free of charge to all new system purchasers who send in their registration card between November 1st - 31st, 1990.

Largely because MacXT's commitment to the high-education market, the original sales have been remarkable (the sale at UBC and at the U.B.C. bookstore has been a year already, and U.B.C. has acquired a MacXT line consisting of over 4000 units from U.B.C. many professors). Hamill, author of *Macintosh* more programs *MacWriter* and *MacWriter II*, has brought himself a MacXT. An enthusiastic MacXT proponent even at the U.B.C. bookstore claims that the 8 MB MacXTstation with its display station for under \$4000 Canadian. A complete computer (Macintosh IIx system) with "only" 10MB RAM produces nearly \$12,000.

Local Advantage

With the announcement of the new machines, MacXT has asked an agreement with Advantage Computers to market MacXT software in Vancouver, and Vancouver MacXT has its own office on Granville Island where the retail is on purchase a base. (Comments of the new machines are expected to reach the local Macintosh) (the Vancouver office, high-education students are entitled to special discounts, as are those who become MacXT commercial software developers. For people lucky enough to buy a MacXT directly, the MacXT user's club meets in the company's office on the last Wednesday of each month. (Tel 604-683-0390.)

Thanks to David Anderson and Ther Hamill, the MacXT line for the new assistance in the preparation of this article.

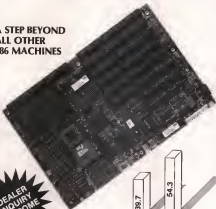


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memory (many of next year's System 7 (or this year's A/UX, Virtual, from Compaq, and others). All other current Mac models include this feature, hence it is likely that LC and Classic computers be "left behind" in this regard. Also, the LC does not include a math coprocessor, which is standard on all other 1020 and 1000-class Macs. It is possible that this may introduce some incompatibilities, and thus the obvious performance degradation that users are accustomed to Macs with math chips may ensue.

The LC has built-in 1-bit video RGB output to Apple's new 13" RGB Display, and does not require a separate video card. However, if you want a higher-resolution AppleColor RGB monitor, it only provides 16 colors unless you upgrade the LC's Video RAM. Similarly, on the new Macintosh 128" Monitor for use Display, the LC's composite color video output expanded with more VRAM. Interestingly, the VRAM expansion increases the 13" RGB Display's performance, too, allowing 25,000 colors. Later all current Macs, the LC includes Apple's new 140MB SuperDisk, which is capable of reading and writing 3.5" 800K, 10MB and Apple II ProDOS data.

The LC also includes a processor direct slot (PDS) to provide for future expansion. The slot is not compatible with those found on other Macintosh. An Apple IIe simulation card has been announced for the slot, leaving the Apple plans to target the school market heavily, where the aging Apple IIe are plentiful. An Apple representative said that the card would run 10% of Apple II software on the machine.

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File

• The Macintosh file is Apple's re-permited to the late-discontinued Mac file (introduced in June of 1989, this discontinuation meant not some kind of server-side file replication. Just a few months ago, the file was Apple's most popular model).

The file, like the LC, features no integrated microphone for audio digitization, allowing the recording and playback of external, microphones and other audio input on various programs. The file features a 20 MHz 68030 CPU (three times faster than a Mac Plus), on-board 8-bit video, and a ROM which can double

as video's Multisync slot, or as SE/30 FDS using optional adapters. (Apple warns that due to space, power supply and CPU performance considerations, not all cards may be compatible.) The adapters also provide the file with a 68000 cache processor, which is unique to the standard model. The computer, substation file (20 MHz video output, a paired memory to the recent 10 MHz file without a video card, which demonstrates its relatively good video. Still, at \$3377 for the 68030 68030/68030 hard disk model, calling that mid a low-cost Mac is clearly stretching things. A 68030/68030 hard disk-equipped model is also available for \$4197. Unlike the Classic and the LC,

however, the file has no built-in expansion.

Lower Cost, Lower Res

Along with the new Mac, Apple's also introduced two lower-cost monitors to replace their earlier highly-regarded desktop monitors. The 12" 68030 Display, an 18.18" Macintosh manufactured monitor has a 20 MHz dot pitch and a resolution of 640x480. On the market since 1987, the still-available Trinitron-based AppleColor 68030 model has a resolution of 1440x960, a 20MHz dot pitch and a street price of \$1899-\$1595. The new monitor will work on any Mac using Apple's 640, 640 or 640x480 video cards, or the built-in circuitry of the Mac Plus.

And a mid to next work with other Apple video cards. Also announced but not yet available is a new 17" monochrome display priced at \$419.

Do You Want Color?

Overall, the question of which machine to buy may not be as simple as "How much money can you afford to spend?" although the price of color is a contributing factor. With the Mac Classic selling for around \$1999, I don't see a significant difference between the target audience for it, and those that recently would have paid a similar price for a Mac Plus (which, now discontinued, can be found for significantly less). Of the two machines, the Classic offers a 10% speed advantage over the Plus, as well as increased disk capacity and flexibility. Chalk one up for progress.

The bigger question is really "Do you want color?" because neither PC, Amiga or Atari you just can't add a color monitor to a Mac Plus, SE or Classic. It is a decision that can be made either from convenience. And unfortunately, there is a subtle subset of Mac programs (mostly graphics-related) that do not work with either Color QuickDraw, which, as you may guess from the name, is not available on the monochrome-only 68000-based Macs. However, a color-capable Mac, such as the LC or file, even if it only has a grayscale monitor, would still be able to run these programs, albeit at a disadvantage if you rather than grayscale living color. In a way of keeping long options open.

The next most significant that I see opening up for Apple is the heavy use of status icons in the Classic Mac. These icons previously may have gone out and provided a good reason for choosing a PC, Amiga or Atari 68030 computer to use this device for a color-rich graphical environment. Now, with the Mac LC (or a 68030 running Windows 3.1), but that's another story), these icons have an opportunity to state what they say and have been able to previously afford.

If nothing, Tempco Commodore and Atari must be looking the chance of consumer PC and Mac prices. The "big guys" are looking in on what has long been their territory.

However, I'm not forecasting doom yet. The Amiga and SE computers have been doing the press with their share of top reviews, particularly at the low end of the market, where their feature sets compare very favorably with PCs or ATs. And those companies are pretty tough, because the low end is a tough place for IBM to show itself as the only 100% when the Commodore 64 occupied all over their PC.

Apple may not realize it yet, but what sells Amiga 500's or Atari ST's is often the simple fact that the customer gets a computer with a graphical user interface, thousands of games, stereo sound and a way of RAM for music or eight hundred dollars. The Mac Classic can't touch that, especially since it's more expensive than the Amiga 500's or Atari ST's in terms of the software that's available in the market.

Sold Clearly After All These Years

All there is, however, is one question that the Macintosh often one of the most elegant, creative computing environments available today, and those are products (and a required fairly modest dollar investment budget) should help Apple bring that message to the people.

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- 1.2MB RAM (1.2MB Cache)
- 1.2MB SCSI Floppy Drive
- 486/33MHz (new) (new)
- 486/33MHz (new) (new)
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- 486/20MHz (new) (new)
- 486/20MHz (new) (new)
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ANOVATION

A Monthly Newsletter From



ANO Office Automation

Peer-to-peer networks are going to be the driving force this decade as the small business connectivity tool. By offering users a cost effective, yet powerful alternative to server-based LANs such as Novell Netware, Microsoft LAN Manager, and Banyan Vines, peer-to-peer networks are here to stay.

BY DEFINITION

A peer-to-peer network is simply a group of PC's operating under MS or PC DOS, linked together via interface cards and cabling (see figure 1). They allow users to share files and programs, expensive hardware resources such as laser printers or CD-ROMs, and communicate via electronic mail.

Although peer-to-peer DOS-based networks offer good value they are most definitely not about to dethrone mighty server-based LANs. Designed to meet the connectivity needs of larger workgroups, LAN operating environments such as Novell's Netware still offer a higher grade of performance and expandability.

From a price/performance standpoint, however, peer-to-peer LAN's offer ex-

ceptional value for small workgroup environments running word processing, spreadsheet, and small database applications.

The ability for users to transfer files, backup all network drives from one station, utilize electronic mail, or share expensive hardware could end up paying for itself very quickly.

A BEST BUY

In a recent poll by a major American computer publication, LANtastic from Artisoft, a Tucson, AZ based company, was selected as the second most sought after network operating system on the market today (Novell's Netware EL5 Level II was number one). PC Magazine, Byte, and PC World (to name just three) have also garnered it with awards as the best low-cost choice for small DOS-based LANs. No wonder we selected it as our peer to peer network operating system of choice.

One of the easiest to use, LANtastic is also one of the most feature rich. Most importantly it doesn't gobble up a lot of your base memory when the network drivers are loaded in. The main station uses less than 40K of RAM,

BY TODD
DRAHOFF

Fantasy Lan

"LANtastic's peer-to-peer network is not only easy to use, and packed with features, it also won't gobble up your precious RAM"





while just under 12K is required for each workstation. Utilizing the optional ROM daughter board can reduce the amount of base memory used on the workstations to 6K.

Artisoft offers two versions of LANtastic. The most cost effective option uses a proprietary 2Mbps card designed for low traffic, work environments.

The second, is an Ethernet version which fully complies with the IEEE 802.3 and NETbus standards for Ethernet connectivity. One obvious advantage is that users looking at possibly expanding into a full server-based network in the future, won't have to throw away their investment. As well, it offers maximum throughput on the network of up to 10Mbps - 5 times that of the proprietary version.

DISKLESS WORKSTATIONS

For users that do not require a floppy or hard drive at their workstation,

LANtastic also directly supports diskless workstations. Essentially, a diskless workstation is a PC with a monitor and keyboard, but without any storage devices. When the system is turned on, the user is automatically logged onto the server via a module which plugs into their network interface card.

ELECTRONIC MAIL

One of the most under utilized features of LANtastic, from our experience anyway, is electronic mail.

In a nutshell, electronic mail (e-mail for short) allows messages to be sent back and forth between users on the LAN. E-mail can be used for phone messages, quick conversations while on the phone, internal memos, or however you need to communicate without getting your message lost in the paper shuffle.

When you send a message to a user, the message will pop up onto the users screen. If the user does not respond within a defined length of

time the message is saved for future reference. The message will state who it is going to, what the message is about, and who sent it.

E-mail, when used properly can be an effective tool for streamlining your office communications system.

One of the most impressive features of LANtastic's e-mail system is voice mail. Acting as an electronic answering machine, users can improve the effectiveness of their mail. Such features as sending recorded messages, and chatting back and forth over a phone hand set plugged into the optional voice card, as well as the ability to erase, rewind, forward, pause, or even broadcast a message to a multiple list of users, make LANtastic's e-mail facility a useful business tool.

LANTASTIC IN ACTION

The first thing that will astound you when you open the package is its lack of documentation. This is not a sign of how lazy Artisoft is, rather it is a reflection of the systems simplicity.

Initial installation is quick and straight forward, via a completely automated routine with plenty of support available through an on-line help function. Of course the faint at heart should let a professional do this, as DOS based systems tend to have mish mash CONFIG and AUTOEXEC files which tend to complicate matters.

Once the server and workstations are setup, the systems menu driven administration facility allows for quick setup of system users and resources. Each user is setup with predefined permissions which restricts access to sensitive data or hardware resources.

After the applications software is setup, users can then share common files and hardware resources spread across the system.

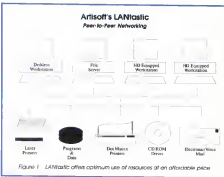


Figure 1 LANtastic offers optimum use of resources of an affordable price



GENTLE REMINDER

Don't go running out and buying any network without first investigating your existing applications to see if they are network compatible. For example, if you decided to link together the accounting department running ACCPAC, you would have to purchase a Network manager pack for every 4 users that will be sharing the system.

Although WordPerfect 5.1 is already network aware, you still have to purchase workstation modules to link in the various stations. Other applications, Lotus 1-2-3 and dBase to name just two, require you to buy a file server version plus the necessary workstation packs.

Of course, if your intent is simply to transfer files from station to station, or utilize electronic mail, then buying network versions is usually irrelevant.

IN GENERAL

As we explained earlier, there are two versions of LANtastic - 2Mbps and Ethernet. Each can be purchased as a starter kit which includes the LANtastic software which supports up to 120 users, two network cards, one 25' cable, and two terminating resistors. Each additional



LANtastic's resource sharing means no line up

station requires a network card, cabling, and a T connector to split the line.

The 2Mbps version is an 8-bit ISA card which supports XT, 286, 386, and 486 compatible systems. Artisoft's 16-bit Ethernet version, also supports these standards by sensing whether the system bus expansion slot is 8 or 16-bit.

For users with IBM PS/2 MicroChannel systems, Artisoft supports Western Digital Eth-

ernet Plus/2 adapters via an optional software driver kit. Simply plug in the card, load the driver onto the PS/2, and you're in business. This must be used in correspondence with the Ethernet version of LANtastic.

Other options available include a ROM daughter card to help reduce the amount of base memory used by the network drivers, a boot ROM daughter card for diskless workstations, voice adapters for voice mail, and "The Network Eye" LAN management software for the more advanced system administrator.

Overall, LANtastic is a smooth running, cost effective, feature rich system designed for the small workgroup. With the minimal investment required, your productivity gains will soon pay for themselves.

ANOVATIONS

AST GOES 1-800

AST Research is now offering end-users in the United States and Canada a new toll-free telephone number with extended service hours. This makes AST the first major non-direct manufacturer offering this level of support. The new technical support telephone number is 1-800-727-1279. Other current support programs for end-users include a technical publications subscription service and a 24 hour electronic bulletin board which offers technical bulletins, software updates, switch and printer settings, press releases and product specifications.

WP UNIX AUTHORIZED

We are proud to announce that the WordPerfect Corporation of Utah, has officially authorized ANO Office Automation to

resell their products in the Unix environment. WordPerfect, the number one selling word processing package, brings to Unix users what DOS users have enjoyed for years!

SUPER BUNDLE

Since You're In! Thanks to an exciting new promotion, buying the award-winning PC Tools from Central Point Software's about to get even better. Between now and December 31, 1990, customers who buy PC Tools can receive free, a full featured copy of 386MAX 5.0. The newest release of Qualitas' acclaimed memory manager for 80386 and 80486 based personal computers. a \$120 value!

JUMBO GOES XENIX

Colorado Memory Systems is now offering a driver for their Jumbo and QFA tape

backup units operating under SCO Xenix 386. The drivers allow for data compression up to 2 times what the normal tape is capable of storing. For example, the Colorado Jumbo tape drive with a DC-3500FD or DC-3150 tape will store up to 120MB of data on a single cartridge. As well, you can link multiple volumes, and even archive DOS and Xenix files on the same tape!

WELCOME ABOARD

ANO Office Automation is pleased to announce the addition of Mr. Inad Zahravi to ANO's sales team in Richmond, B.C. Inad is an experienced systems analyst, specializing in networking personal computers under both Novell and Banyan Vines.



TECH • TALK

Q. What is meant by the term "low level format" for hard disk drives?

A. Essentially, low level formatting is a process whereby a raw hard disk is prepared for use before the operating system is loaded on. This is done by way of a third party software package such as On Track's Disk Manager, or through the hard disk controller itself.

During this process the hard drive is primed and a bad track table, which is simply a list of the undesirable spots, is created and embedded in the

initialization track. When DOS, OS/2, or Novell is loaded onto the drive, the low level format makes sure that you don't write data to the bad portions (note that Xenix and Unix hard drives, although they must be low level primed have their own table which you setup during installation).

Let us compare this to baking a pie. Before you put your dough (the operating system) into the pan (the hard disk), you usually grease it with butter or lard (the low level format). If the pan is not greased, the crust will char and stick, thus creating a rather

pathetic pie.

One important rule about low level formats, is that they do not last forever. Which is why you should consider either bringing your system in for a PC Tune Up, where we redo your hard drives low level format (DOS systems only), or consider purchasing a software package such as Gazelle's Optimo 2.0 or Gibson Research's Spin Rate II. These packages will reconstruct your hard drives low level format without damaging any data.

Should you have any questions for Tech Talk, please feel free to send them to:

ATTENTION: TECH TALK
c/o ANO Office Automation
110-11100 Voyager Way
Richmond, B.C.
V6X 3E1



Business today has come to rely on its PC vendors to offer top notch service at a reasonable price. To many this may seem to be a contradiction of terms, but to us at ANO it is a reality.

In response to this demand, ANO offers a comprehensive support package geared to meet every level of business user. Starting with our Connect Support Program, every user can take advantage of complimentary telephone support. This program allows users to call us up with queries on their spreadsheets, database, desktop publishing, or even communications packages without worrying about receiving a bill for support.

For the corporate user looking at stabilizing expenses, and reducing billing headaches, while receiving top notch on site service and support, we offer our Security Support Program. Since billing is done once a year, there are no worms

SERVICE ON THE FLY

"Our downtime is reduced, thus our productivity is enhanced."

about reconciling your support bills or going over budget. As well, security subscribers receive priority service over non-subscribers. Since, security is on-site service, there are no delays in shipping your system for depot service. The work is done in your office by a trained service technician.

One added variation ANO provides its users with Security Support, compared to other on-site service organizations, is best put into words by Mr. Derek Godfrey of Mohon Breweries, who states that "the people at ANO take the time to analyze a problem over the phone before rushing out to help. This means that when they actually come to our office they are prepared to resolve the problem. Our down time is reduced, thus our productivity is enhanced."

Service On The Fly continued on page 5



PROFESSIONAL TRAINING

British Columbia Institute of Technology (BCIT)

ANO Professional Training

Date	Course	Course #	Duration	Fee
Nov 08	WordPerfect 5.1/6.0	59284	4 wks	\$161
Nov 19	ACCPAC A/P	C32N39399	4 wks	\$161
Jan 14	ACCPAC G/L	10148	4 wks	\$161
Jan 14	Ventura Publishing	23629	4 wks	\$161
Jan 15	dBase IV Level 1	16223	4 wks	\$161
Jan 16	Exploring DOS	02963	6 wks	\$241
Jan 16	Wordperfect Level 1	18017	4 wks	\$161
Jan 17	Lotus 1-2-3 Level 1	16129	4 wks	\$161
Feb 11	ACCPAC A/R	21648	4 wks	\$161
Feb 11	dBase IV Level 1	21578	4 wks	\$161

Date	Course	Location	Fee
Nov 10	Intro MS DOS	R/K/T/E	\$75
Nov 14	Intro WordPerfect	R/K/E	\$75
Dec 08	Intro to MS DOS	R/K/T/E	\$75
Dec 29	Intro WordPerfect	R/K/E	\$75
Jan 12	Intro to MS DOS	R/K/T/E	\$75
Jan 16	Intro WordPerfect	R/K/E	\$75
Feb 09	Intro to MS DOS	R/K/T/E	\$75
Feb 23	Intro WordPerfect	R/K/E	\$75

If your organization is looking for specialized training, or requires fully equipped classroom facilities, let ANO give you a hand. Talk to your ANO rep for further information.

R = Richmond • K = Kelowna • T = Toronto • E = Edmonton

Call BCIT at 604-1610 to register

Call your nearest ANO office for further information.

Service On The Fly continued from page 4

The Security Support Program also extends to local and wide area networks. Our fully qualified support staff offer not only support for existing and new equipment, but we also offer installation and training for Novell, Banyan Vines, and LANtastic. So, whether you're starting out with one PC, or twenty PCs, we'll be there every step of the way.

"Service and support have been the pillars by which ANO stands on," states Mr. Ken Wong, Service Manager at ANO's head office in Richmond, B.C., "without service we cannot expect customer satisfaction, and without customer satisfaction we would become a memory like many of the discount operations we've seen in the past."

Connect and Security, two support programs to fit both your budget and your needs.

End



PC Tune-Up

Service it or not, computers are the cars. They require a tune up once in a while. Before your system falls apart, give it the tune up it needs for a full 24 hour make-over. It may be the cheapest investment you'll ever make.

only \$75.00

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NEW PRODUCT!

AST Research Premium II 386sx/20

The most recent "hot" product to hit the streets this year has been personal workstations powered by Intel's new 80386sx-20 microprocessor. In keeping with a commitment to offering the latest in PC technology, AST Research is proud to announce a new member of its Premium family - the AST Premium II 386sx/20.

Built around AST's patent pending CUPID-32 architecture, this new power house offers a built-in migration path to allow performance upgrades as your needs grow.

CUPID ARCHITECTURE

In a nutshell, CUPID-32 (Completely Universal Processor I/O Design) isolates those components most likely to change with technology (microprocessor and math coprocessor) on a replaceable processor card. Buying into this technology leaves the option open to a simple upgrade to the next level of processing - be it 386/25 or 33, 486/25 or 33, or even the 586 (when available).

Todd Drahoff, manager of ANO's Corporate Systems Group, exclaims that "One of the main reasons we chose AST for our clients is the commitment AST has shown to the future. They are realists. They know that since technology changes, and users needs change, so should their computers be able to adapt to the times."

MAXIMUM EXPANDABILITY

Designed to offer full expandability, AST built a Super VGA adapter, mouse port, floppy controller, hard drive host adapter, and the I/O ports right into the system board. Facing up expansion slots for LAN boards, modems, mainframe emulation, and specialty cards is just another way AST is looking out for your future.

MORE BANG FOR YOUR BUCK

There's a lot of power packed into the AST Premium II 386sx/20.

Besides a dedicated CPU board loaded with the 20mhz, 80386sx processor, two full megabytes of ram, sockets for up to 16MB of memory and support for 80386sx math coprocessor, you'll also find AST's cache memory architecture for increased performance.

"Since the inception of the Intel SX processor," Drahoff explains, "we have seen a massive migration in the business community away from 286 based systems. According to our clients, they see the SX as a more stable technology that perfectly compliments applications such as Lotus 1-2-3 Release 3.1 and Microsoft's Windows 3.0. In our opinion this new offering from AST will become the benchmark for workhorse personal computers!"

HAPPY ANNIVERSARY!

Apart from this new release, Fall 1990 also marks the 10th anniversary for AST Research. Way back in 1980 AST was a pioneer in PC expansion technology. Over the next decade they have maintained their commitment to expandability.

Such products as their CUPID-32 architecture, high performance memory expansion boards, PC-to-Mainframe links, network interfaces, and the development of what we now know as the LIM EMS 4.0 expanded memory protocol, prove that they are truly the leader in extending the life span of personal computers.

Congratulations AST for a job well done, and our best wishes in your next 10 years!

NOTE: Along with this introduction, AST has also announced substantial price reductions on its Premium 386sx/16.



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EXPRESS YOURSELF



Attention all Mac desktop and portable users! Announcing the affordable alternative to high priced Apple printers. With GDT Software's JetLink Express, you can now quickly and painlessly hook your Mac into any of Canon's powerful BubbleJet or Laser printers.

JetLink Express is as simple to install as it is to use. Package options are available for both types of printers, which include the necessary cables and software.

Compatible with the Macintosh Plus or higher, operating under System 6.0.2 or higher, you can take advantage of high quality output at a more than attractive price.

Mac portable users will definitely appreciate the portability of the Canon BJ-10c which offers exceptional resolution in a light weight package.

More sophisticated CAD users, or those wishing for peace and quiet even while they print, the Canon BJ-130c promises

superb text and graphics at less than 45dB - in other words it's quiet.

Not to be left out, Canon's laser printers will leave you breathless. Whether your needs are small and compact (the LBP-4), or big and complex (the dual bin / duplex LBP-8111 T), Canon has a printer for you.

Designed with strict adherence to Apple's interface guidelines, JetLink Express will work wonders with whatever your application. Including but not limited to PageMaker, Adobe Illustrator, MacDraw II, WordPerfect, MacProject, Wings, and even Adobe Type Manager.

GDT and Canon - changing the way Mac users express themselves.



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Dexton Enterprises Inc.

Dexton Enterprises Incorporated consists of a **team of highly trained design specialists and Electrical Engineers** who target small and medium-size businesses and guide them through their automation phase professionally.

Through its "solution oriented" service, Dexton provides its users with **computers, software, and training from ONE source** (at better than market values)—a complete solution. This results in a more efficient, effective and easier to operate system. It also provides greater consistency in the level of expertise and after sales support.

Dexton is the parent company of the Argonne Development Corporation. Dexton's spectrum of products and services is diversified. It ranges **from simple word processing and database systems to developing dual link terminal and telescope interfaces for the University of British Columbia**. It also extends into supplying the F.E.E. student branches with computing equipment to facilitate parallel data processing, installation of the first Canadian remote interface to the United Airlines Apollo terminal, and developing customized software for ICBC agents in their pilot program.

Dexton's intense commitment to projects such as the Shad Valley program, the Canadian Centre for Creative Technology, the Arts, Sciences and Technology Centre, and the Variety Club television has garnered significant profile for the company both in the corporate and academic environment. It is just a small portion of our **dedication and commitment to society** that paves the way to becoming good corporate citizens.

If you require any more information regarding the company or the line of products and services, **please feel free to contact us at 433-5966 or 437-6077**. We will be more than happy to help.

"The DEXTON computer is top quality and allows us to utilize some of the best software applications on the market for IBM PC's without the necessity of undertaking the purchase cost of the baseframe unit."

Graeme McCarthy
October 3rd, 1989

"My experience with DEXTON began over two years ago when I bought two separate machines. One machine was applied to standard office work: book-keeping, mail processing and terminal emulation. It has worked flawlessly from day one. The second machine was custom designed by DEXTON, at a minimal charge, to be the application of controlling (IRC) starlight telescope also the Geophysics and Astronomy building. The machine blew a power supply due to an electrical short some 3 months after purchase. Even though this was past the normal warranty DEXTON came out and replaced the power supply at only labour cost. Everything has been fine since. I would be happy to allow a demonstration of our DEXTON machines to anyone who is interested. I recommend it to anyone without qualification as far as my experience is concerned."

David King, Customer
University of British Columbia
December 1, 1987

**ROLAND 9101
or PANASONIC 1100 PRINTER**

9 Pin Near Letter Quality Printer
192 Characters Per Second Speed Draft (36 cps LQ)
3 Near Letter Quality Fonts: Courier, Pica, Elite
2 Draft Fonts, Pica, Elite
Handles both letter head and
tractor paper
Ribbon Included

\$199^{95*}



**ROLAND 2417
or PANASONIC 1124 PRINTER**

24 Pin Near Letter Quality Printer
192 Characters Per Second Speed Draft (6
5 Near Letter Quality Fonts
Front Entry Feed
Handles both letter head
and tractor paper
Ribbon Included

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**ROLAND 2465
or PANASONIC 1624 PRINTER**

24 Pin Near Letter Quality Wide Carriage Ps
192 Characters Per Second Speed Draft (6
5 Near Letter Quality Fonts
Front, Top, Rear Bottom Entry Feed
Handles letter head, tractor paper,
and envelopes
Ribbon Included

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**HEWLETT PACKARD
LASERJET HP LASER PRINTER**

4 Pages Per Minute
300 Dots Per Inch, 50 page tray
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Supports Expansion Font Cartridges
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Supports Expansion Font Cartridges
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3-1/2" Drive \$129 Extra

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The EASYLAN Office Network



PC Magazine
Editor's
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If your office owns two or more computers that require the ability to transfer files between machines as well as share the same printer and hard disk, then **EASYLAN can save you \$1000 or more per PC** by eliminating duplicate equipment purchases. You simply connect up to 20 computers via RS-232 links and you're in business.

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If your needs are similar to those described above, but also require each terminal to be able to run the same program without buying multiple copies of that program, then **LANLINK** is the solution for you. Now you only need to purchase one copy of the costly software and each PC (or dumb terminal) will be able to use it, as well as share a printer and hard disk. Great for classrooms. **LANLINK is probably the fastest zero-wait network in the world with over 50,000 users!** It connects two computers via parallel ports instead of serial ports, resulting in an increase in speed up to 4-5 times. And if that is not fast enough for you, talk to us about adding a MAXSPEED board. Now up to 25 computers can be connected together to share the software and printers on one main computer.

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Network up to 5 computers together using

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